Integration Document

Cerabar S Pressure Transmitter via FOUNDATION Fieldbus to the PlantPAx Process Automation System

System Using a 1788-EN2FFR or CN2FFR

PlantPAx
Process Automation System

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Endress+Hauser
People for Process Automation

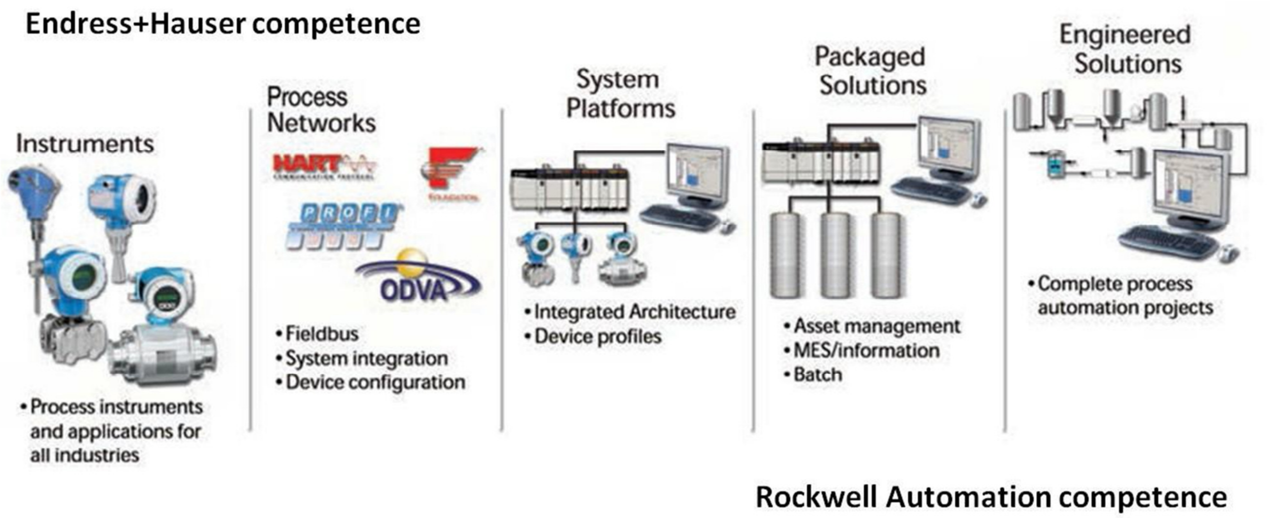
Allen-Bradley • Rockwell Software

Rockwell Automation

Preferred Integration

Rockwell Automation and Endress+Hauser have strengthened their strategic alliance to provide complete process automation solutions that use best-in-class instrumentation, software, and control systems.

There are hundreds of different components in a typical plant: controllers, remote I/O, electrical drives, safety equipment, and sensors. Each must be integrated, configured, and optimized during start-up and operation. Recognizing the challenges this creates, Rockwell Automation and Endress+Hauser are focused on providing scalable, off-the-shelf solutions.


Endress+Hauser competence
Instruments
• Process instruments and applications for all industries
Process Networks
HART
PROFI
ODVA
• Fieldbus
• System integration
• Device configuration
System Platforms
• Integrated Architecture
• Device profiles
Packaged Solutions
• Asset management
• MES/information
• Batch
Engineered Solutions
• Complete process automation projects
Rockwell Automation competence

To reduce the risks associated with integrating many devices from many different suppliers, Rockwell Automation pretests many third-party manufactured HART, FOUNDATION Fieldbus, EtherNet/IP, and PROFIBUS PA field devices in the system test laboratory for compatibility with the Rockwell Automation PlantPAx automation system. Each field device is connected to the PlantPAx system and is subjected to interoperability testing procedures similar to operating procedures in your plant. The results of each field test are recorded in a test report for integration planning purposes.

For Endress+Hauser field devices, an additional step provides an “Integration Document” and “Interoperability Statement” for each tested instrument. The Integration Document provides information on installation, configuration, startup, and operation of the integrated system. The Interoperability Statement is assurance that the Endress+Hauser field device meets PlantPAx system interoperability performance measures, as jointly established by Rockwell Automation and Endress+Hauser and verified through completion of common test procedures performed by either company. Both the Integration Document and Interoperability Statement help reduce risk and provide ease of integration.

The overall mission of the alliance is to provide proven solutions that combine field instrumentation with fieldbus networks, such as HART, FOUNDATION Fieldbus, PROFIBUS PA, and EtherNet/IP networks, with asset management capabilities and Rockwell Automation's system capabilities to provide a total engineered solution.

Through preferred integration and support of increasing requirements for plant-wide control, the alliance offers the following benefits:

- Reduced integration costs throughout engineering, commissioning, and start-up
- Optimized plant availability and output
- Ensured product quality and consistency
- Optimized traceability to meet regulatory demands
- Predictive maintenance through intelligent instruments

For new construction, process improvements at an existing plant, or operating cost reductions, the alliance delivers the following:

- Preferred integration reduces risk, reduces integration costs, and protects investment with pre-engineered interoperability. Both companies believe open systems and standardized interfaces bring maximum benefits.
- Advanced diagnostics with plant-wide control provides better visibility of plant health and easier access to instrument diagnostics, which ultimately leads to faster troubleshooting and improves decision-making.
- Collaborative lifecycle management leads to improvements in design, engineering, and startup and support of plants. This collaboration increases productivity, manages information about instrumentation assets, optimizes plant assets, and results in a complete lifecycle management solution.

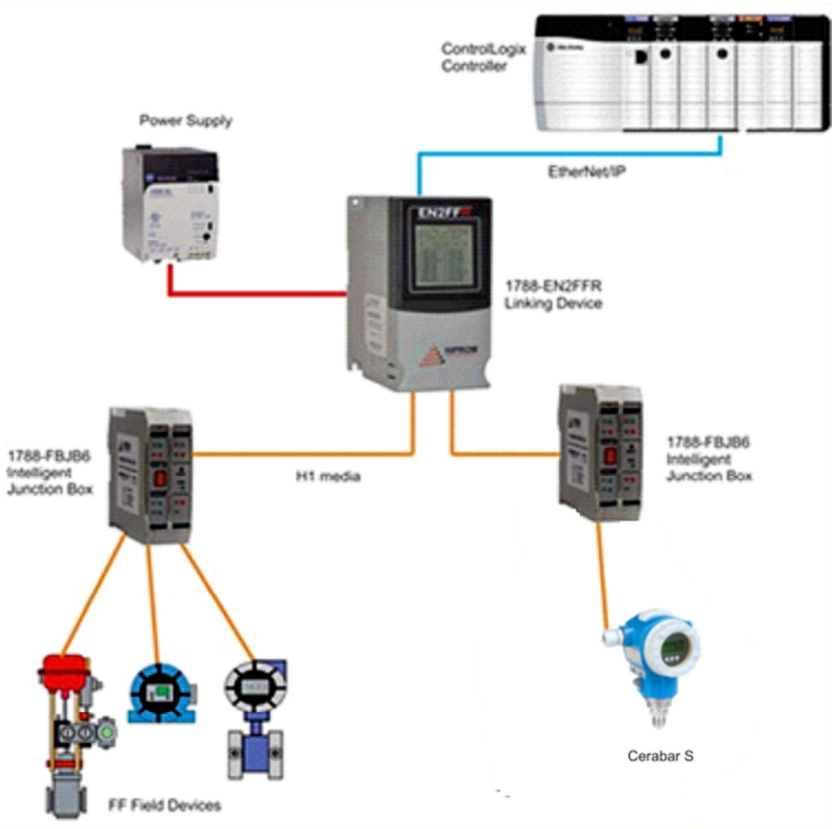
PlantPAx
Process Automation System

Application Overview

This document provides a step-by-step approach to integrating an Endress+Hauser Cerabar S Pressure Transmitter into a Rockwell Automation PlantPAx process automation system.

This Section	Describes
Application Overview	Details about the field instrument and control system.
System Details	Specifications on the required hardware and software components.
Installation	How to install and connect the instrument, linking device and other components.
Configuration	How to: • Configure the EN2FFR OR CN2FFR linking device. • Configure the measurement instrument.
Visualization	How to implement and configure a graphical display of device information.

The ControlLogix platform provides a robust EtherNet/IP backbone for communication to process fieldbus networks. The PlantPAx architecture uses producer/consumer technology, allowing input information and output status to be shared by all ControlLogix controllers in the system. This integration document assumes you have a working knowledge of ControlLogix systems. For more details regarding the equipment and tasks described in this document see additional resources.


ControlLogix Controller
Power Supply
EtherNet/IP
1788-EN2FFR Linking Device
1788-FBJB6 Intelligent Junction Box
H1 media
1788-FBJB6 Intelligent Junction Box
Cerabar S
FF Field Devices

1788-EN2FFR EtherNet/IP Network
The diagram above is an example of an EtherNet/IP network.

This integration document assumes you have a working knowledge of ControlLogix systems. For more details regarding the equipment and tasks described in this document, see Additional Resources.

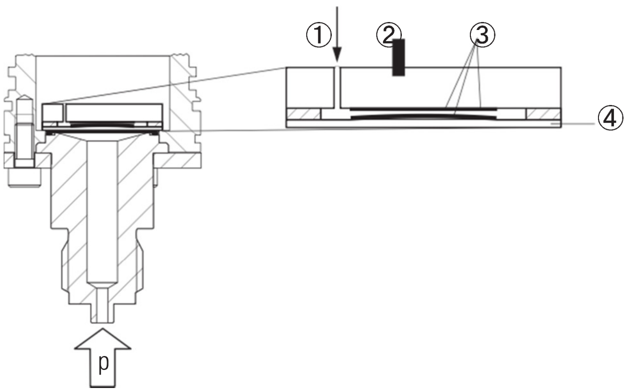
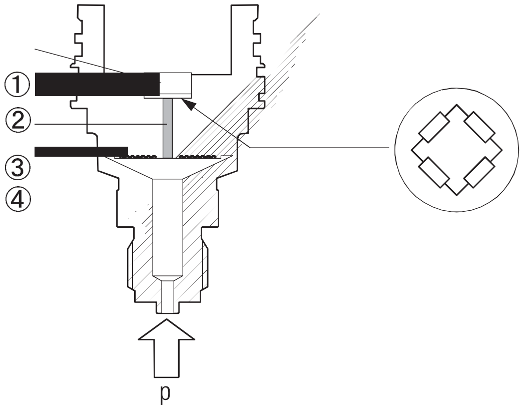
Cerabar S Pressure Transmitter

Pressure transmitter with metal sensor Overload-resistant and function-monitored; Communication via HART, PROFIBUS PA or FOUNDATION Fieldbus

- Absolute pressure and gauge pressure in gases, steams or liquids in all areas of process engineering and process measurement technology
- Level, volume or mass measurements in liquids
- High process temperature
  - without diaphragm seals up to 150 °C (302 °F)
  - with typical diaphragm seals up to 400 °C (752 °F)
- High pressure up to 700 bar (10500 psi)
- MID part certificate as per OIML R117-1 Edition 2007 € and EN 12405-1/A1 Edition 2006
- International usage thanks to a wide range of approvals

Your benefits:

- Very good reproducibility and long-term stability
- High reference accuracy: up to ±0.075 %, as PLATINUM version: ±0.05 %
- Turn down up to 100:1, higher on request
- Used for process pressure monitoring up to SIL3,
- certified to IEC 61508 by TÜV SÜD
- HistoROM®/M-DAT memory module
- Function-monitored from the measuring cell to the electronics
- Continuous modularity for differential pressure, hydrostatics and pressure (Deltabar S – Deltapilot S –Cerabar S), e.g.
  - replaceable display
  - universal electronics
- • Quick commissioning with Quick Setup menu
- • Menu-guided operation
- • Extensive diagnostic functions
- • Device versions compliant with ASME-BPE
- • Usage in drinking water: NSF

Ceramic process isolating diaphragm used for PMC71 Ceraphire®	**Metal process isolating diaphragm used for PMP71 and PMP75**
	
Ceramic Sensor 1. Air Pressure (gauge pressure sensor) 2. Ceramic substrate 3. Electrodes 4. Ceramic process isolating diaphragm	Metal Sensor 1. Silicon measuring element substrate 2. Wheatstone bridge 3. Channel with fill fluid 4. Metal process isolating diaphragm

Ceramic process isolating diaphragm used for PMC71 (Ceraphire®)

The ceramic sensor is a dry sensor, i.e. the process pressure acts directly on the robust ceramic process isolating diaphragm and deflects it. A pressure-dependent change in capacitance is measured at the electrodes of the ceramic substrate and the process isolating diaphragm. The measuring range is determined by the thickness of the ceramic process isolating diaphragm.

Advantages:

- Guaranteed overload resistance up to 40 times the nominal pressure
- Thanks to ultrapure 99.9% ceramic (Ceraphire®, see also "www.endress.com/ceraphire")
  - extremely high chemical stability, comparable with Alloy
  - less relaxation
  - high mechanical stability
- Suitable for vacuums
- Secondary containment for enhanced integrity
- Process temperatures up to 150 °C (302 °F)

Metal process isolating diaphragm used for PMP71 and PMP75

PMP71

The operating pressure deflects the process isolating diaphragm and a fill fluid transfers the pressure to a resistance bridge (semiconductor technology). The pressure-dependent change in the bridge output voltage is measured and evaluated.

Advantages:

- Can be used for process pressures up to 700 bar (10500 psi) absolute pressure
- High long-term stability
- Guaranteed overload resistance up to 4 times the nominal pressure
- Secondary containment for enhanced integrity
- Significantly less thermal effect compared to diaphragm seal systems

PMP75

The operating pressure acts on the process isolating diaphragm of the diaphragm seal and is transferred to the process isolating diaphragm of the sensor by a diaphragm seal fill fluid. The process isolating diaphragm is deflected and a fill fluid transfers the pressure to a resistance measuring bridge. The pressure-dependent change in the bridge output voltage is measured and evaluated.

Advantages:

- Depending on the version, can be used for process pressures up to 400 bar (6000 psi) and extreme process temperatures
- High long-term stability
- Guaranteed overload resistance up to 4 times the nominal pressure
- Secondary containment for enhanced integrity

Signals from Instruments to Control System

FOUNDATION Fieldbus Interface:

- FOUNDATION fieldbus H1, IEC 61158-2, galvanically isolated
- Data transmission rate: 31.25 kBit/s
- Current consumption: 12 mA
- Permitted supply voltage: 9 to 32 V
- Error current FDE (Fault Disconnection Electronic): 0 mA
- Bus connection with integrated reverse polarity protection
- Signal encoding: Manchester II
- ITK Version 5.0
- Number of VCRs: 44
- Number of Link Objects in VFD: 50
- Number of Instantiate blocks: 15
- Virtual communication references (VCRs)
  - Permanent Entries: 44
  - Client VCRs: 0
  - Server VCRs: 5
  - Source VCRs: 8
  - Sink VCRs: 0
  - Subscriber VCRs: 12
  - Publisher VCRs: 19
- Function Blocks:
  - Resource Block
  - 2 x Analog Input (execution time 45ms)
  - 1 x Digital Input (exec. time 40ms)
  - 1 x Digital Input (exec. time 60ms)
  - 1 x PID (exec. time 120ms)
  - 1 x Arithmetic (exec. time 50ms)
  - 1 x Input Selector (exec. time 35ms)
  - 1 x Signal Characterizer (exec. time 30ms)
  - 1 x Integrator (exec. time 35ms)
  - 1 x Analog Alarm (exec. time 35ms)
- Output data: Pressure, Flow or Level, Process temperature, Pressure after damping, Pressure peakhold indicator, Counter for maximum pressure transgressions, Totalizer 1, Error code via DI channels (channel 0 to 6)
- Link Master (LM) function is supported

Control System

The control system includes these components:

Component	Description
Controller	The Logix controller is a modular, high performance controller, which uses RSLogix 5000 programming software to configure, program, and monitor a system.
FOUNDATION Fieldbus linking device	The 1788-EN2FFR linking device provides a gateway between EtherNet/IP and a single segment FOUNDATION Fieldbus H1 layer. The 1788-CN2FFR linking device provides a gateway between ControlNet and FOUNDATION fieldbus (FF). Hereafter, both modules are referred to as the linking device. The linking device can support 16 field devices and is configurable through RSLogix™ 5000 by a dedicated add-on-profile (AOP). Multiple levels of media redundancy are supported, including ring, split, and redundant trunk, plus options for H1 media, redundant linking devices, redundant controllers, and ControlNet. The linking device has full FOUNDATION fieldbus host capability, including link active scheduler (LAS) capability.
Programming software	PlantPAx is an easy object-oriented, explorer-based, drag-and-drop configuration that allows you to build complex process functions. Furthermore, the software allows you to mix and match IEC61131-3 compliant programming languages. All supported programming languages share the same development environment, tag database, and user interface, resulting in reduced training and higher productivity.
Visualization software	FactoryTalk® View Site Edition software is HMI software program for monitoring, controlling, and acquiring data from manufacturing operations throughout an enterprise. A generic display provides a graphical representation via faceplates of the field instrument connected to the EN2FFR linking device.

Asset management software	**FactoryTalk AssetCentre**, with a fully scalable design, provides a set of asset-centric focused tools for securely and centrally managing factory and process automation production environments. It secures access to the control system, tracks users' actions, managing asset configuration files, configuring process instruments, and provides backup and recovery of operating asset configurations. • Change management — management of security, configuration and archiving of control assets. • Process device management — calibration and configuration for process instrumentation. • Condition monitoring — predict or prevent impending failures of process instrumentation with centralized device information. • Disaster recovery — for all assets and devices. FactoryTalk AssetCentre is based on the open, industry-leading FDT/DTM technology integrated into the PlantPAx process automation system. It is a common environment and launch application for Device Type Manager (DTM). An expanding library of Device DTMs and an array of Communication DTMs are supported. The optional smart device configuration tool, **FieldCare**, and the Life Cycle Management tool W@M are Endress+Hauser's plant asset management solution. • Easy to implement and to scale up into existing infrastructure. • Entire management of smart field devices supporting EtherNet, HART, PROFIBUS, FOUNDATION Fieldbus and Wireless HART. • Supports the entire device life cycle based on W@M starting with engineering through ordering, installation, configuration, commissioning, calibration, documentation management and spare parts handling. • Endures technology migration by supporting all device DTMs and iDTMs for DD based devices. • Allows communication through third party systems supporting FDT/DTM technology. • Condition monitoring: used for preventive and predictive maintenance based on diagnostic information from field devices. FieldCare suite enables you to step into the asset management world with a sustainable investment and offers the possibility to scale up to an integrated asset management solution

Example System

Endress+Hauser and Rockwell Automation interoperability testing is performed for every new device and product.

Hardware Components

Component	Catalog Number
E+H Cerabar S pressure transmitter	PMC71-APE2K6RAANA
Hiprom FOUNDATION Fieldbus Communications Module or Hiprom ControlNet Communications Module	1788-EN2FFR 1788-CN2FFR
Allen-Bradley Stratix 8000 Switch	1783-MS10T
Allen-Bradley Power Supply	1606-XLE
Allen-Bradley ControlLogix Control System	1756-L73
Allen-Bradley EtherNet Bridge	1756-EN2TR
HiProm FOUNDATION Fieldbus Termination	FBJ-B6

For further details, see the PlantPAx Process Automation System Selection Guide, publication PROCES-SG001-EN-P.

Software Components

Component	Catalog Number
PlantPAx	
RSLogix 5000 Enterprise Series programming software, Professional edition Includes: • RSLinx Classic software • RSLinx Enterprise software	9324-RLD700NXENE
FactoryTalk View Site Edition (SE) software (optional)	9701-VWSXXXXXENE
FactoryTalk AssetCentre server	9515-ASTSRVRENE
FactoryTalk AssetCentre process device configuration	9515-ASTPRDCFENE
E+H FieldCare Standard Asset Management software (optional)	SFE551

For specifications of the engineering workstation (EWS) and operator workstation (OWS), see theIntegrated Architecture for Process Control System Recommendations Manual, publication PROCES-RM001.

See Additional Resources for complete installation instructions, including warnings.

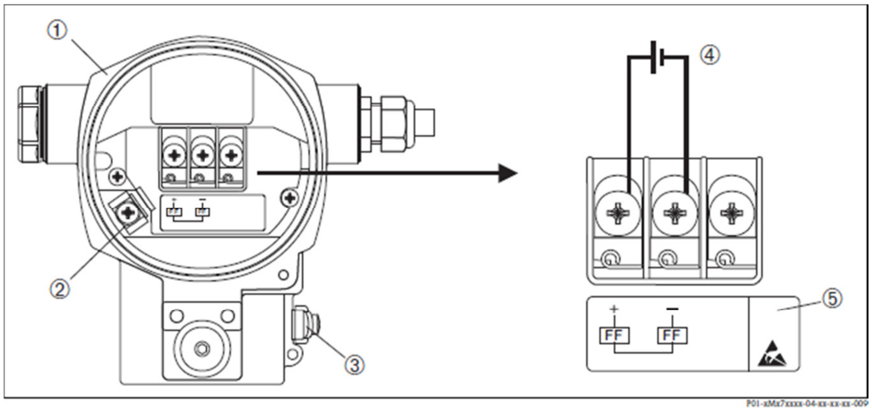
Installation and Configuration

Installing a Cerabar S Transmitter

The following information is a summary of the installation procedures. See Additional Resources for complete installation instructions, including warnings.

Cerabar S Installation Overview

Refer to the figures in this section when using the installation instructions.



Item	Description
1	Housing
2	Internal ground terminal
3	External ground terminal
4	Supply voltage, for version in non-hazardous area = 9…32 V DC
5	Devices with integrated overvoltage protection are labeled OVP (overvoltage protection) here

Connect a Cerabar S Pressure Transmitter

Typical Procedure

For illustrations, refer to the figures in Cerabar S Installation Overview on page 13.

1. Remove the housing cover of the terminal compartment.
2. Guide the cable through the gland.
3. Connect the device in accordance to the Installation Diagram on the previous page.
4. Screw down the housing cover.
5. Secure the ground cable to the ground terminal.

Note: Supply voltage must match the voltage noted on the nameplate.

IMPORTANT	Between the stripped cable and the ground terminal, the cable shielding should not exceed a length of 5 mm (0.20 in).

Verify Grounding and Shielding

Cerabar S must be grounded, for example by means of the external earth terminal.

Different grounding and screening installation methods are available for FOUNDATION Fieldbus networks such as:

- Isolated installation (see also IEC 61158-2)
- Installation with multiple grounding
- Capacitive installation

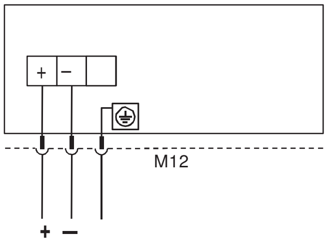
Fieldbus Connector

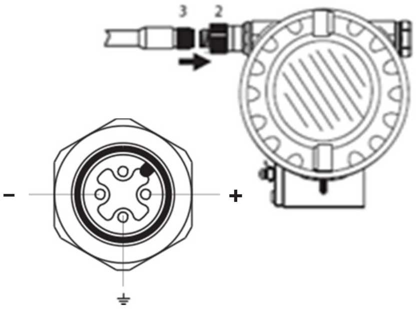
The connection technology of FOUNDATION Fieldbus allows measuring devices to be connected to the fieldbus via uniform mechanical connections, such as T-boxes, distribution modules, etc. This connection technology, which uses prefabricated distribution modules and plug-in connectors, offers substantial advantages over conventional wiring.

- Field devices can be removed, replaced or added at any time during normal operation. Communication is not interrupted.
- Installation and maintenance are significantly easier.
- Existing cable infrastructures can be used and expanded instantly, e.g. when constructing new star distributors using 4-channel or 8-channel distribution modules.

The device can therefore be supplied with a ready-mounted fieldbus connector. Fieldbus connectors for retrofitting can be ordered from Endress+Hauser as a spare part. Please see Endress+Hauser Support and contact your representative.

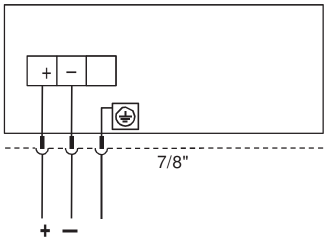
Connecting Devices with M12 Plug

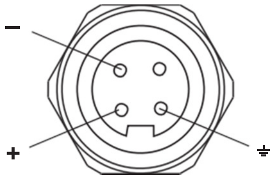




Item	Description
Left	Electrical connection for devices with M12 plug
Right	View of the plug at the device

Connecting Devices with 7/8" Plug





Item	Description
Left	Electrical connection for devices with 7/8" plug
Right	View of the plug at the device

Hiprom Linking Device Overview

The following section demonstrates installation of both the EN2FFR and the CN2FFR. Programming and other setup instructions contained in the remaining sections of this manual are consistent with either linking device. Refer to the figures in this section when using the installation instructions.

Connect a Field Instrument to EN2FFR

The 1788-EN2FFR linking device is designed to operate within the Rockwell Automation PlantPAx system using EtherNet/IP as the communication backbone to the FOUNDATION Fieldbus process device network. All power required for the module's operation is derived from an external 24V power supply. For current consumption, please refer to electrical specifications in the EN2FFR user manual.

The following installation can be accomplished by either traditional methods or by utilizing fieldbus connectors (optional). In this section, both methods are described to allow you to choose the installation method best suited to the application.

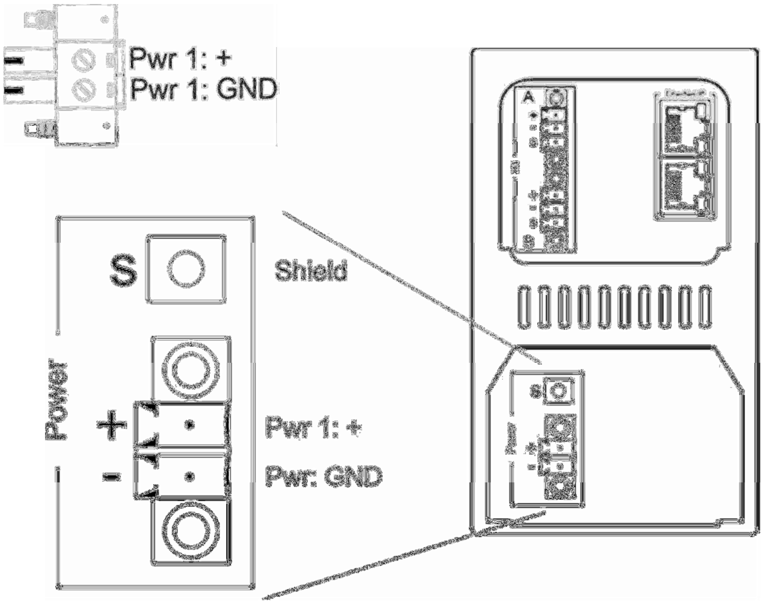
Hardware

ATTENTION: Do not wire more than one conductor on any single terminal.

Power Connection

The power supply must be compliant with CE safety extra low voltage (SELV) or protected extra low voltage (PELV), and UL Class 2 or limited voltage/current requirements.

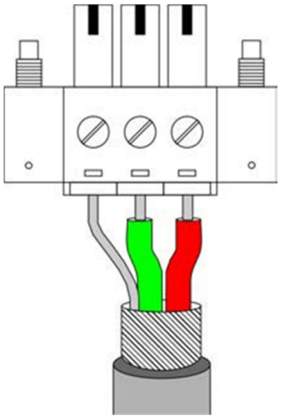
We recommend a 24-32V DC power supply for the linking device to operate correctly. No additional power supplies or power conditioners are required. The power supply connection is described here.



IMPORTANT Do not use additional power supplies or power conditioners with the 1788-EN2FFR and 1788-CN2FFR linking devices.

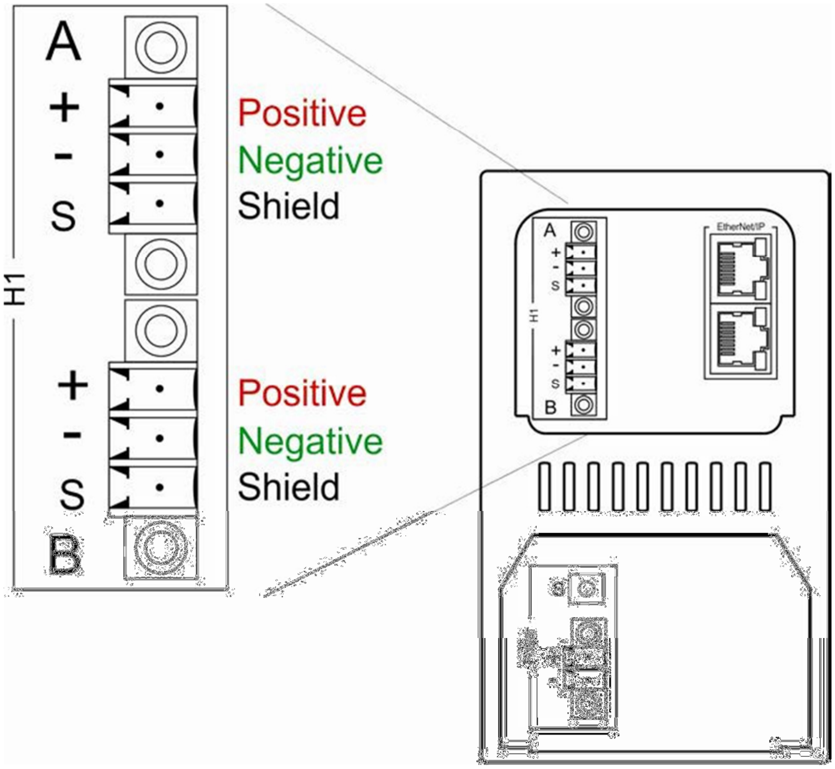
H1 Network Connections

The H1 network must be connected via the H1 terminal on the linking device. The H1 network connection and pin-out is described here.



Pin	Description
Right/Top (red)	FF +
Middle (green)	FF -
Left/Bottom	Shield

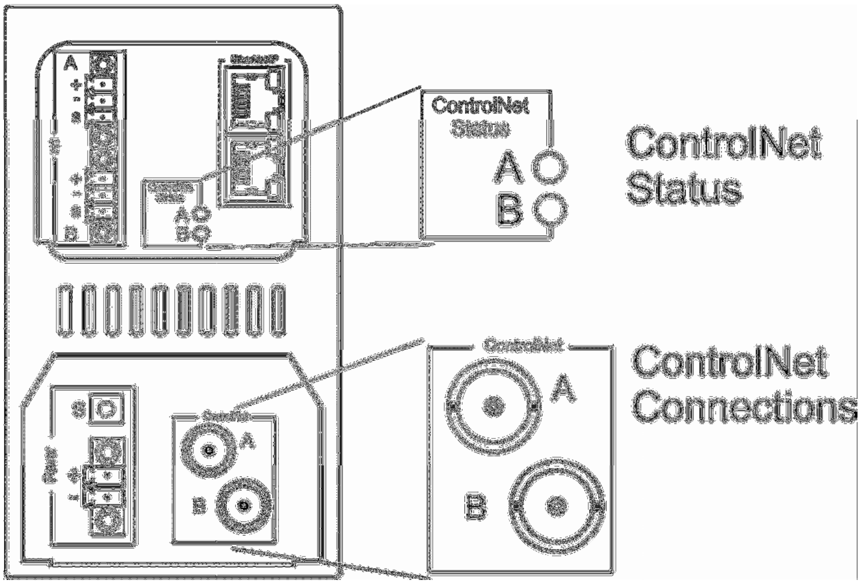
The H1 Segment is split between two physical ports, A and B.


A
+
-
S
H1
+
-
S
B
Positive
Negative
Shield
Positive
Negative
Shield
EtherNet/IP

ControlNet and EtherNet/IP Connections

Two BNC connectors on the base of the 1788-CN2FFR linking device provide connections for single or dual ControlNet media. The dual port EtherNet/IP switch provides connections for multiple EtherNet topologies, including Device Level Ring (DLR). The EtherNet/IP port can also be used as a connection point in the field to access the Web server or asset management tools.

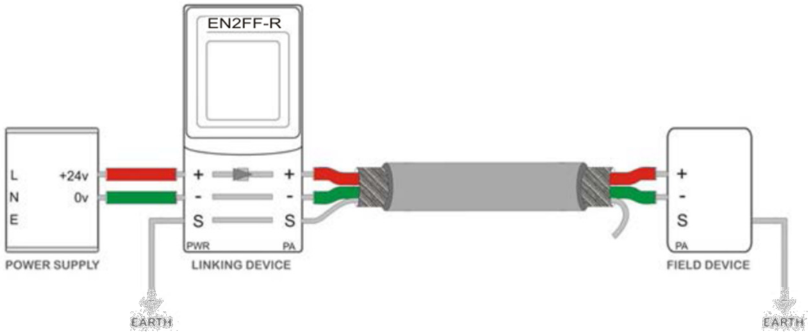
The ControlNet connections are described here.


ControlNet Status
A
B
ControlNet Status
ControlNet
A
ControlNet Connections
B

Shielding

Ground the linking device shield connection to a clean earth connection. Connect the shield to the H1 media so that connectivity runs through all junction boxes, but is not connected to the field device shield or grounded at the device.

Do not attach the H1 media shield to the field device. Tape the media shield back to avoid accidental contact with other conductors or ground.

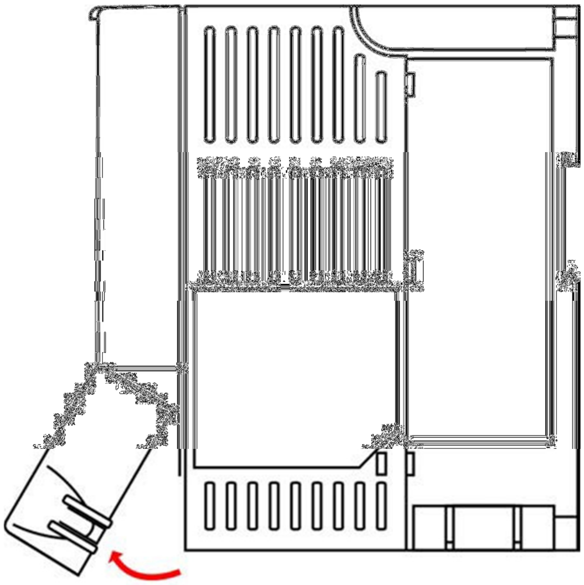

EN2FF-R
L
N
E
+24v
0v
POWER SUPPLY
+
-
S
PWR
+
-
S
PA
LINKING DEVICE
+
-
S
PA
FIELD DEVICE
EARTH
EARTH

Set the Linking Device Network Address

This section describes the network address switches.

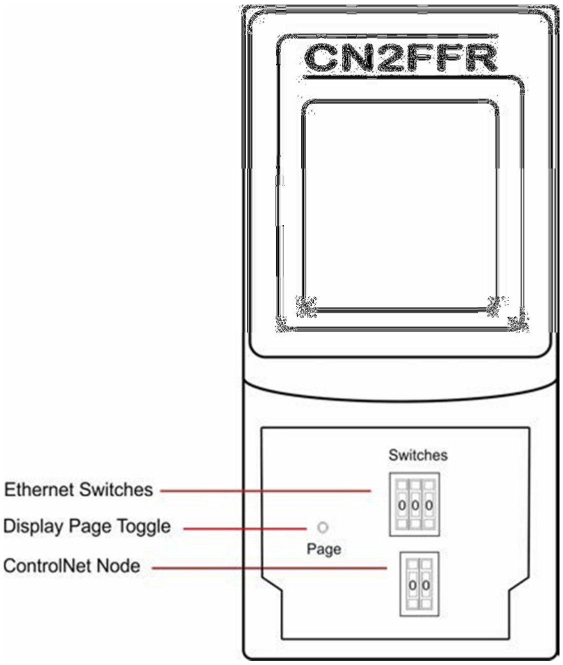
Hardware Switches Location

The hardware switches are located under the front cover of the linking device. Use the Page button to toggle between different diagnostics on the display.



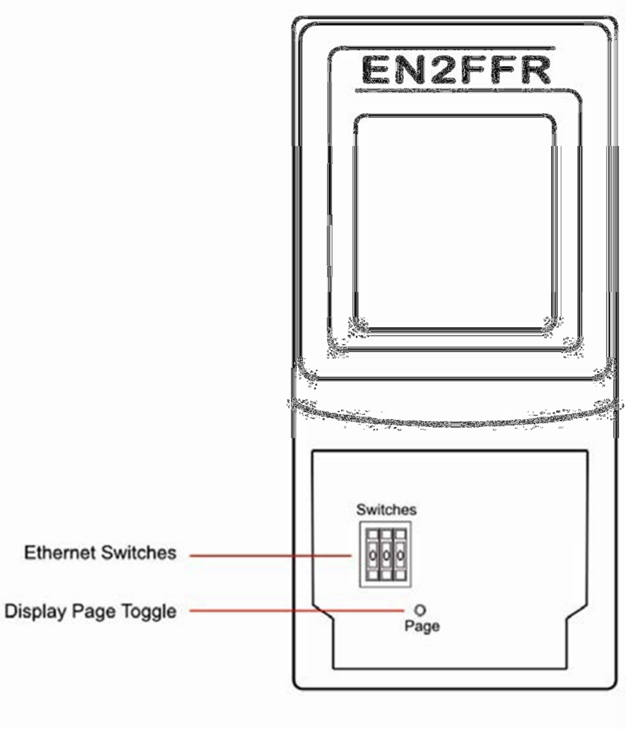
Set the ControlNet Node Address

To set the ControlNet node address of the 1788-CN2FFR linking device, use the hardware switches behind the front cover.


CN2FFR
Switches
Ethernet Switches
Display Page Toggle
Page
ControlNet Node
000
00

Set the EtherNet/IP Address

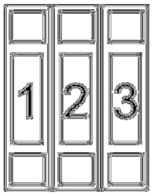
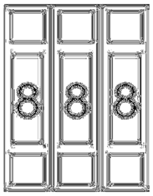
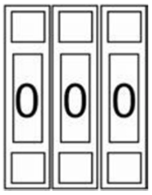
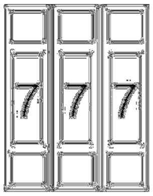
The linking device uses an RJ45 connector to connect to an Ethernet network. The linking device ships with BOOTP enabled. To set the IP address of the
1788-EN2FFR linking device, use a BOOTP server or use the hardware switches.



IMPORTANT Power down the linking device before changing the Ethernet switch settings.The IP address is set during power up.

Ethernet Switch Settings

This table describes the Ethernet switch settings.

Ethernet Switch	Description
	To set the IP address of the linking device to the 192.168.1.xxx sub net, set the switches to the required last three digits. In this example, the linking device will start up with IP address: 192.168.1.123.
	To set the IP address of the linking device via a BOOTP server, set the switches to 888 (factory default setting). Power up the linking device and set the IP address using any BOOTP server. Once the new IP address has been set, power down the linking device, return the switches to 000, and power up the linking device.
	Normal setting after setting IP address with BOOTP. The 000 setting disables BOOTP and holds the IP address.
	The linking device has the option to run the firmware that it was originally shipped with. If the power was cycled while upgrading the firmware, the linking device may not start up because the firmware was corrupted. Set the switches to 777 to set the linking device into Safe mode and upgrade the firmware again.

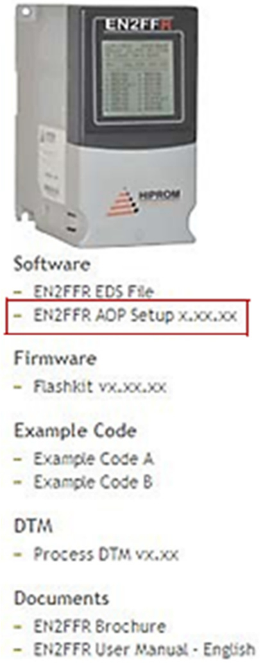
Install the Cerabar S Add On Profile (AOP)

You need the AOP for RSLogix 5000 to configure and manage the linking device.

The installation of the AOP includes the HSProcessUtility that is used to manage DTMs and DD service libraries. See Appendix B.

The AOP install file is available on the accompanying CD, or you can download the file from the product website www.hiprom.com.

Go to the page for your linking device and click the link for the AOP Setup software on the right side of the page (1788-EN2FFR linking device shown).


EN2FFR
HIPROM

Software
- EN2FFR EDS File
- EN2FFR AOP Setup x.xx.xx

Firmware
- Flashkit vx.xx.xx

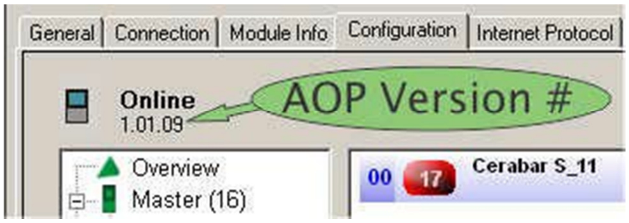
Example Code
- Example Code A
- Example Code B

DTM
- Process DTM vx.xx

Documents
- EN2FFR Brochure
- EN2FFR User Manual - English

AOP Version

The AOP version of the linking device is located on the display during the startup process, or via the web server.


General
Connection
Module Info
Configuration
Internet Protocol
Online
1.01.09
AOP Version #
Overview
Master (16)
00
17
Cerabar S_11

TIP: You can also click the upper-left corner of the profile window and click About Module Profile to view the AOP version.

Install the Device Type Manager Files (DTMs)

To install the Hiprom AOP and DTM, go to the Hiprom site and download the files. Open the files, one at a time and follow the onscreen prompts. Wait until you are finished installing the first file before installing the next.

To install the Cerabar S DTM, go to the Endress+Hauser website and download the file. Open and install by following the onscreen prompts.

Firmware Version

The firmware version is printed on the linking device and displayed on the screen during power up. The web server also provides the firmware version.

Load the Electronic Data Sheet (EDS) File

Although the EDS file for this device is typically included in the installation of the AOP, it is also available for you to install separately. If necessary, you can access it from the device through the Webserver or the manufacturer's website.

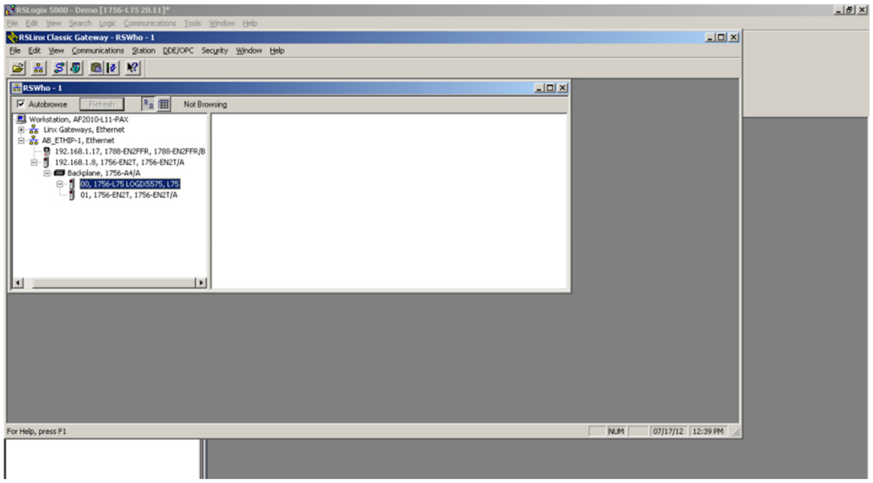
IMPORTANT Use the RSLinx EDS Hardware Installation Tool to install the EDS file.

Configure the EN2FFR and Cerabar S in RSLogix 5000

The steps necessary to setup and configure the EN2FFR and Cerabar S in RSLogix 5000 are presented on the following pages.

In the RSLogix 5000 project, ensure that the Ethernet Module(s) and communication is established before proceeding with installation of the EN2FFR and Cerabar S.

Using RSWho Active, verify the recognized devices and communications.

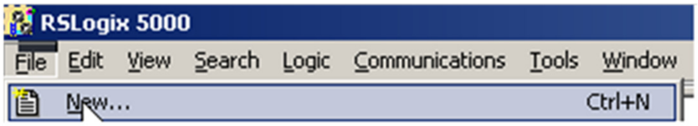

RSLogix 5000 - Demo [1756-L75 20.11]*
File Edit View Search Logic Communications Tools Window Help
RSLinx Classic Gateway - RSWho - 1
File Edit View Communications Station DDE/OPC Security Window Help
RSWho - 1
☑ Autobrowse
Refresh
Not Browsing
Workstation, AF2010-L11-PAX
Linx Gateways, Ethernet
AB_ETHIP-1, Ethernet
192.168.1.17, 1788-EN2FFR, 1788-EN2FFR/B
192.168.1.8, 1756-EN2T, 1756-EN2T/A
Backplane, 1756-A4/A
00, 1756-L75 LOGIX5575, L75
01, 1756-EN2T, 1756-EN2T/A
For Help, press F1
NUM
07/17/12
12:39 PM

The Controller, Bridge, and Linking Devices must be added to the I/O tree of the ControlLogix Controller in RSLogix 5000 before the user can configure the devices.

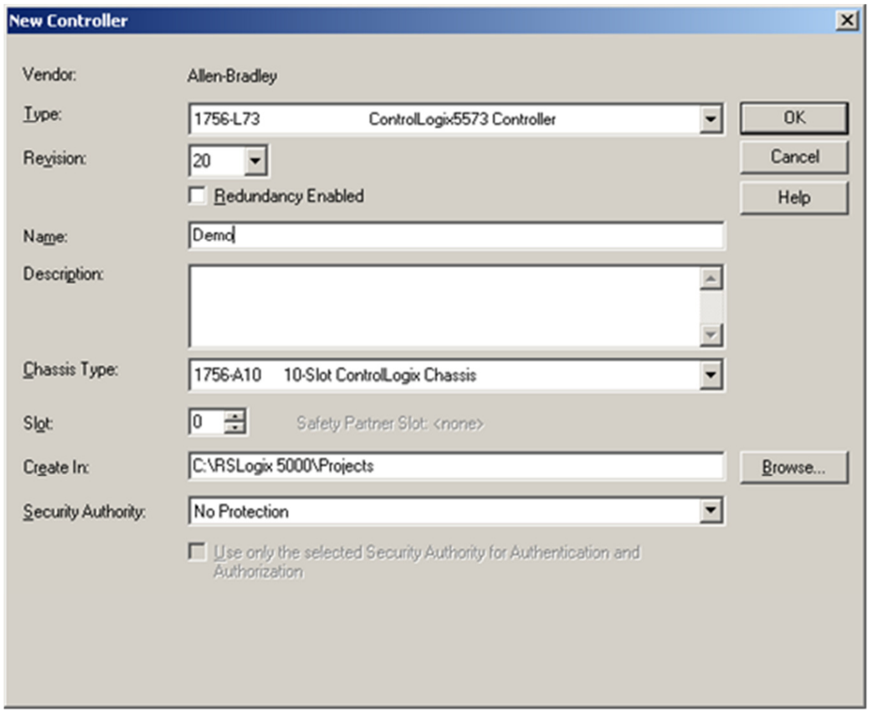
For assistance with setting up Ethernet communications via the ControlLogix Platform, refer to www.rockwell.com or ask the local Rockwell Automation distributor.

IMPORTANT For this example, use I/O configuration utility to select module and Add IP address for the 1756-EN2T to 192.168.1.8 and 192.168.1.17 for the Linking Device. Your addressing may be different.

1. Open RSLogix 5000 and select **File**.
2. Click **New**.

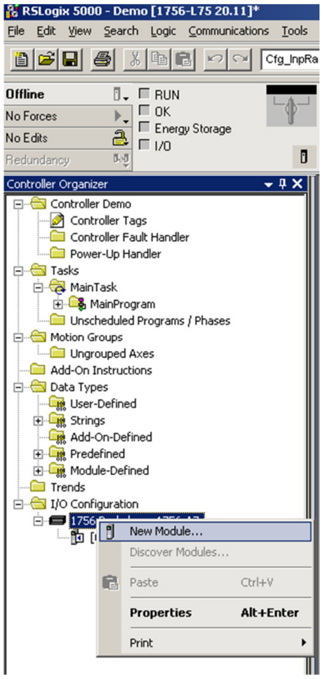

RSLogix 5000
File
Edit
View
Search
Logic
Communications
Tools
Window
New...
Ctrl+N

3. The New Controller window will appear.


New Controller
OK
Cancel
Help
Browse...

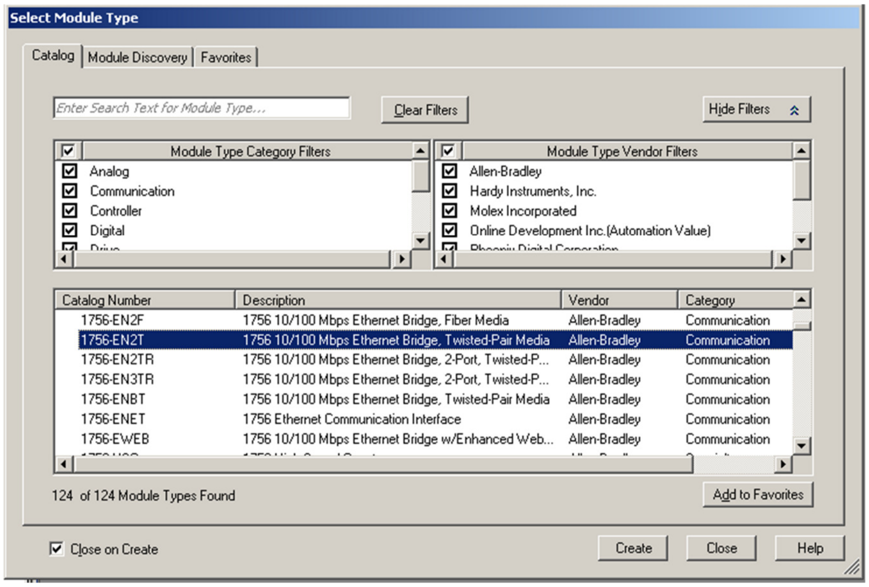
Vendor: Allen-Bradley
Type: 1756-L73 ControlLogix5573 Controller
Revision: 20
☐ Redundancy Enabled
Name: Demo
Description:
Chassis Type: 1756-A10 10-Slot ControlLogix Chassis
Slot: 0 Safety Partner Slot: <none>
Create In: C:\RSLogix 5000\Projects
Security Authority: No Protection
☐ Use only the selected Security Authority for Authentication and Authorization

4. Select the **Type** of controller, revision, and fill in the remaining fields with the appropriate information for the available equipment. Click **OK**. The controller you just configured will now be in the tree on the left of the RSLogix 5000 window.


RSLogix 5000 - Demo [1756-L75 20.11]*
File Edit View Search Logic Communications Tools
Cfg_InpRa
Offline
No Forces
No Edits
Redundancy
RUN
OK
Energy Storage
I/O
Controller Organizer
Controller Demo
Controller Tags
Controller Fault Handler
Power-Up Handler
Tasks
MainTask
MainProgram
Unscheduled Programs / Phases
Motion Groups
Ungrouped Axes
Add-On Instructions
Data Types
User-Defined
Strings
Add-On-Defined
Predefined
Module-Defined
Trends
I/O Configuration
1756
New Module...
Discover Modules...
Paste Ctrl+V
Properties Alt+Enter
Print

5. Right click on **1756 Backplane**, and click on **New Module**. The Select New Module Type screen will appear.

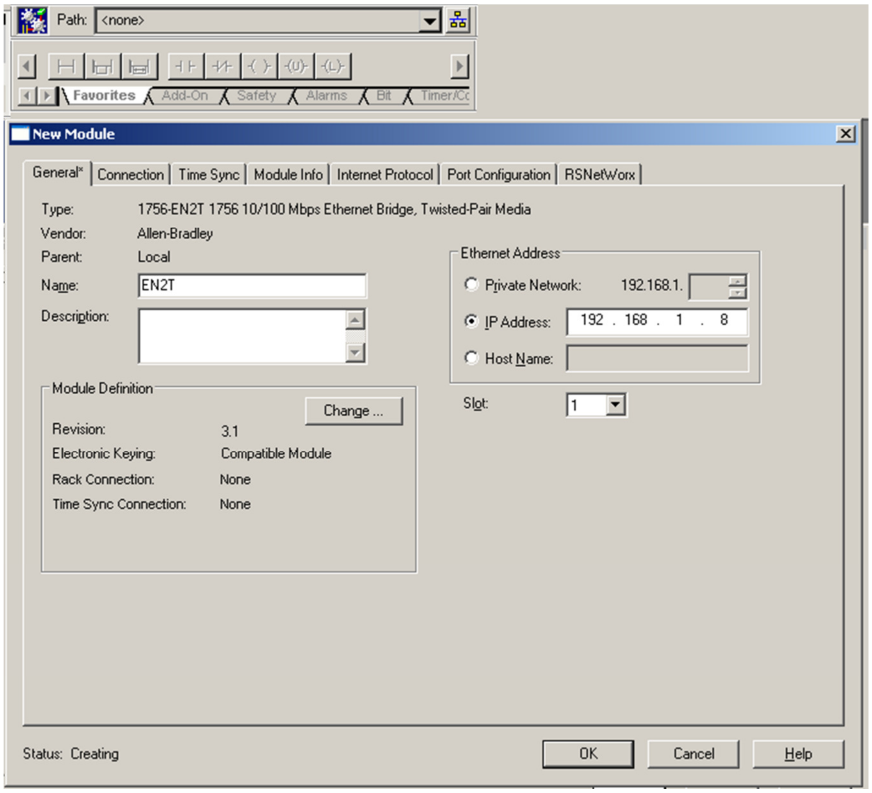
6. Add the module 1756-EN2T by selecting it from the list. Then click **Create**.


Select Module Type
Catalog
Module Discovery
Favorites
Enter Search Text for Module Type...
Clear Filters
Hide Filters
☑ Module Type Category Filters
☑ Analog
☑ Communication
☑ Controller
☑ Digital
☑ Module Type Vendor Filters
☑ Allen-Bradley
☑ Hardy Instruments, Inc.
☑ Molex Incorporated
☑ Online Development Inc.(Automation Value)
Add to Favorites
☑ Close on Create
Create
Close
Help

Catalog Number	Description	Vendor	Category
1756-EN2F	1756 10/100 Mbps Ethernet Bridge, Fiber Media	Allen-Bradley	Communication
1756-EN2T	1756 10/100 Mbps Ethernet Bridge, Twisted-Pair Media	Allen-Bradley	Communication
1756-EN2TR	1756 10/100 Mbps Ethernet Bridge, 2-Port, Twisted-P...	Allen-Bradley	Communication
1756-EN3TR	1756 10/100 Mbps Ethernet Bridge, 2-Port, Twisted-P...	Allen-Bradley	Communication
1756-ENBT	1756 10/100 Mbps Ethernet Bridge, Twisted-Pair Media	Allen-Bradley	Communication
1756-ENET	1756 Ethernet Communication Interface	Allen-Bradley	Communication
1756-EWEB	1756 10/100 Mbps Ethernet Bridge w/Enhanced Web...	Allen-Bradley	Communication

124 of 124 Module Types Found

7. In the New Module window, enter the EtherNet address 192.168.1.8 and fill in the remaining fields.


Path: <none>
Favorites
Add-On
Safety
Alarms
Bit
Timer/Cc
New Module
General*
Connection
Time Sync
Module Info
Internet Protocol
Port Configuration
RSNetWorx
Change ...
OK
Cancel
Help

Type: 1756-EN2T 1756 10/100 Mbps Ethernet Bridge, Twisted-Pair Media
Vendor: Allen-Bradley
Parent: Local
Name: EN2T
Description:

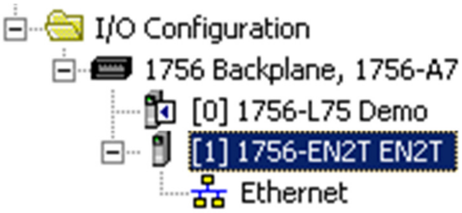
Module Definition
Revision: 3.1
Electronic Keying: Compatible Module
Rack Connection: None
Time Sync Connection: None

Ethernet Address
○ Private Network: 192.168.1.
● IP Address: 192 . 168 . 1 . 8
○ Host Name:

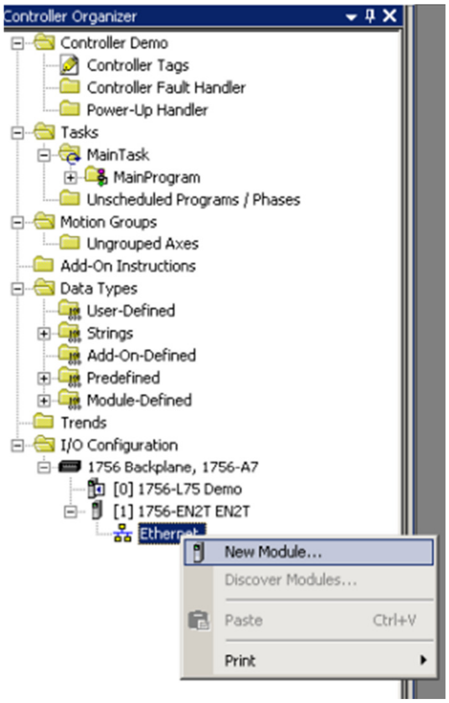
Slot: 1

Status: Creating

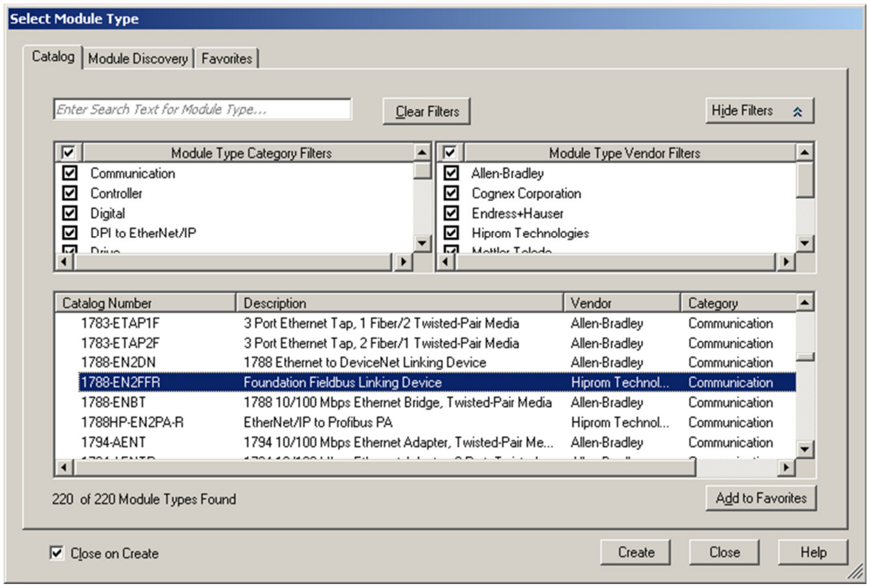
8. Click **OK**. The new device window will now be in the I/O tree.


I/O Configuration
1756 Backplane, 1756-A7
[0] 1756-L75 Demo
[1] 1756-EN2T EN2T
Ethernet

9. Rick click on the **EtherNet** symbol just below the newly added EN2T. Click **New Module**.


Controller Organizer
Controller Demo
Controller Tags
Controller Fault Handler
Power-Up Handler
Tasks
MainTask
MainProgram
Unscheduled Programs / Phases
Motion Groups
Ungrouped Axes
Add-On Instructions
Data Types
User-Defined
Strings
Add-On-Defined
Predefined
Module-Defined
Trends
I/O Configuration
1756 Backplane, 1756-A7
[0] 1756-L75 Demo
[1] 1756-EN2T EN2T
Ethernet
New Module...
Discover Modules...
Paste Ctrl+V
Print

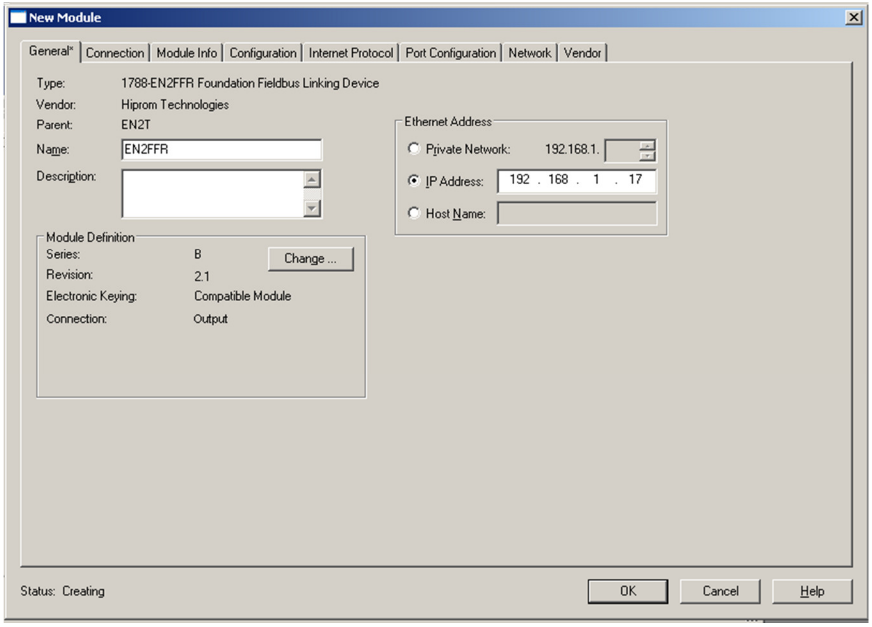
10. Select EN2FFR, then click **Create.**


Select Module Type
Catalog
Module Discovery
Favorites
Enter Search Text for Module Type...
Clear Filters
Hide Filters
Module Type Category Filters
☑ Communication
☑ Controller
☑ Digital
☑ DPI to EtherNet/IP
Module Type Vendor Filters
☑ Allen-Bradley
☑ Cognex Corporation
☑ Endress+Hauser
☑ Hiprom Technologies
Add to Favorites
☑ Close on Create
Create
Close
Help

Catalog Number	Description	Vendor	Category
1783-ETAP1F	3 Port Ethernet Tap, 1 Fiber/2 Twisted-Pair Media	Allen-Bradley	Communication
1783-ETAP2F	3 Port Ethernet Tap, 2 Fiber/1 Twisted-Pair Media	Allen-Bradley	Communication
1788-EN2DN	1788 Ethernet to DeviceNet Linking Device	Allen-Bradley	Communication
1788-EN2FFR	Foundation Fieldbus Linking Device	Hiprom Technol...	Communication
1788-ENBT	1788 10/100 Mbps Ethernet Bridge, Twisted-Pair Media	Allen-Bradley	Communication
1788HP-EN2PA-R	EtherNet/IP to Profibus PA	Hiprom Technol...	Communication
1794-AENT	1794 10/100 Mbps Ethernet Adapter, Twisted-Pair Me...	Allen-Bradley	Communication

220 of 220 Module Types Found

11. Fill in the fields including the EtherNet address of 192.168.1.17 and click **OK**.


New Module
General*
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Change ...
OK
Cancel
Help

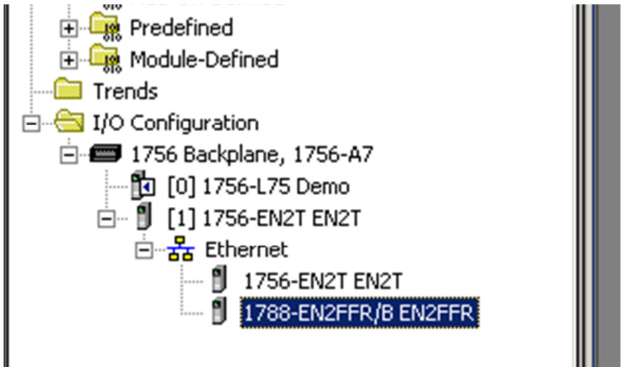
Type: 1788-EN2FFR Foundation Fieldbus Linking Device
Vendor: Hiprom Technologies
Parent: EN2T
Name: EN2FFR
Description:

Module Definition
Series: B
Revision: 2.1
Electronic Keying: Compatible Module
Connection: Output

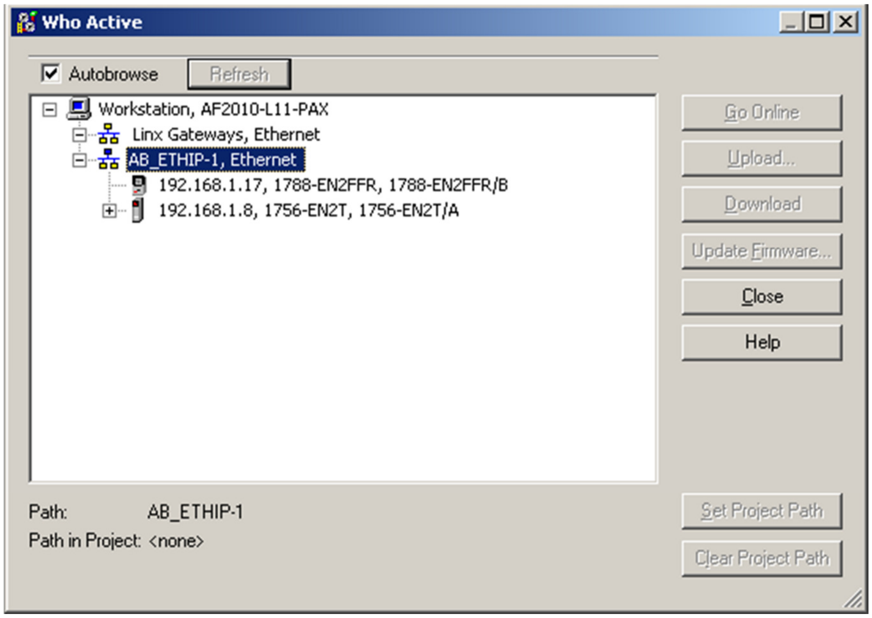
Ethernet Address
○ Private Network: 192.168.1.
● IP Address: 192 . 168 . 1 . 17
○ Host Name:

Status: Creating

12. The I/O tree should resemble this.


Predefined
Module-Defined
Trends
I/O Configuration
1756 Backplane, 1756-A7
[0] 1756-L75 Demo
[1] 1756-EN2T EN2T
Ethernet
1756-EN2T EN2T
1788-EN2FFR/B EN2FFR

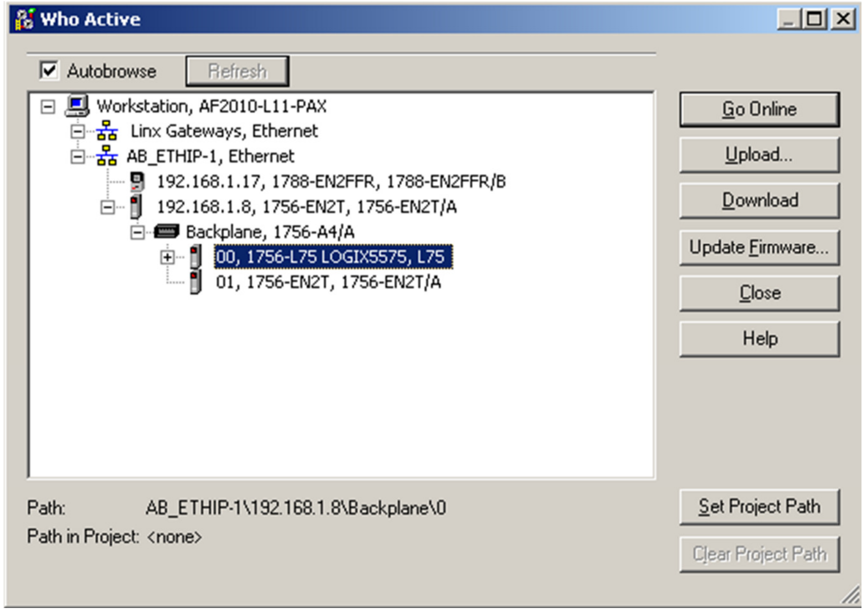
13. Go online with RSLogix 5000 by opening the **Communication** menu at the top of the screen and select **Who Active**. The following window will appear.


Who Active
☑ Autobrowse
Refresh
Go Online
Upload...
Download
Update Firmware...
Close
Help
Set Project Path
Clear Project Path

Workstation, AF2010-L11-PAX
Linx Gateways, Ethernet
AB_ETHIP-1, Ethernet
192.168.1.17, 1788-EN2FFR, 1788-EN2FFR/B
192.168.1.8, 1756-EN2T, 1756-EN2T/A

Path: AB_ETHIP-1
Path in Project: <none>

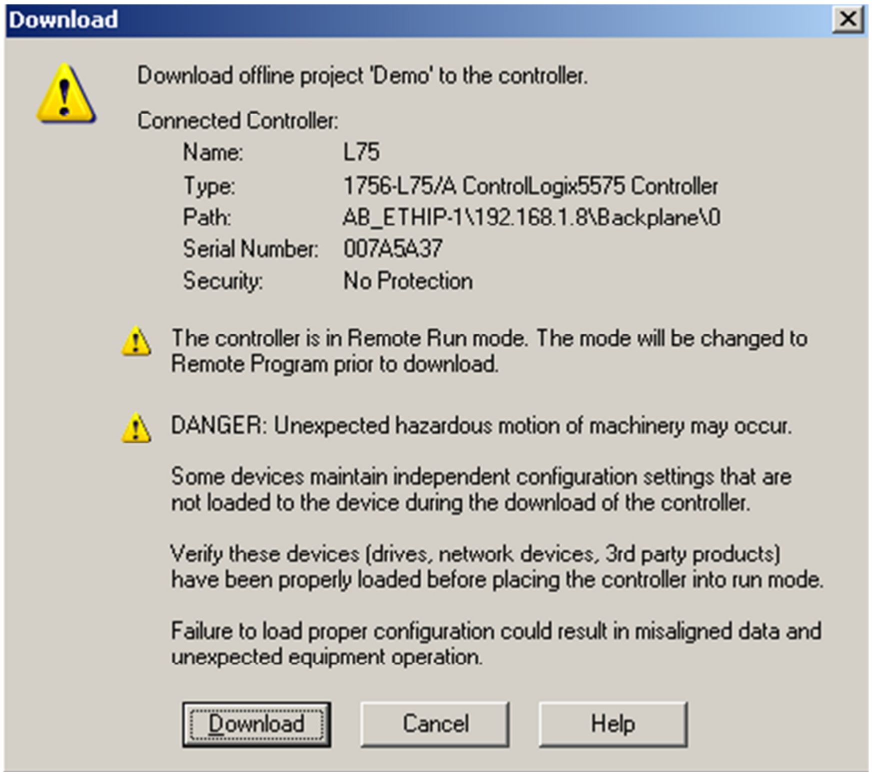
14. Expand the tree to find the ControlLogix controller by clicking the **plus sign** to the left of the EN2T Ethernet module, as well as the Backplane. Select the processor from the tree. In this case it is number 1756-L75. Then click **Download**


Who Active
☑ Autobrowse
Refresh
Go Online
Upload...
Download
Update Firmware...
Close
Help
Set Project Path
Clear Project Path

Workstation, AF2010-L11-PAX
Linx Gateways, Ethernet
AB_ETHIP-1, Ethernet
192.168.1.17, 1788-EN2FFR, 1788-EN2FFR/B
192.168.1.8, 1756-EN2T, 1756-EN2T/A
Backplane, 1756-A4/A
00, 1756-L75 LOGIX5575, L75
01, 1756-EN2T, 1756-EN2T/A

Path: AB_ETHIP-1\192.168.1.8\Backplane\0
Path in Project: <none>

15. Click **Download** when the following screen appears.



Download

Download offline project 'Demo' to the controller.

Connected Controller:

Name:	L75
Type:	1756-L75/A ControlLogix5575 Controller
Path:	AB_ETHIP-1\192.168.1.8\Backplane\0
Serial Number:	007A5A37
Security:	No Protection

The controller is in Remote Run mode. The mode will be changed to Remote Program prior to download.

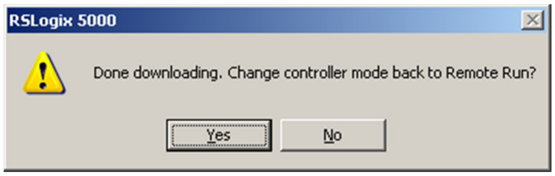
DANGER: Unexpected hazardous motion of machinery may occur.

Some devices maintain independent configuration settings that are not loaded to the device during the download of the controller.

Verify these devices (drives, network devices, 3rd party products) have been properly loaded before placing the controller into run mode.

Failure to load proper configuration could result in misaligned data and unexpected equipment operation.

16. Click **Yes** when the download is finished.

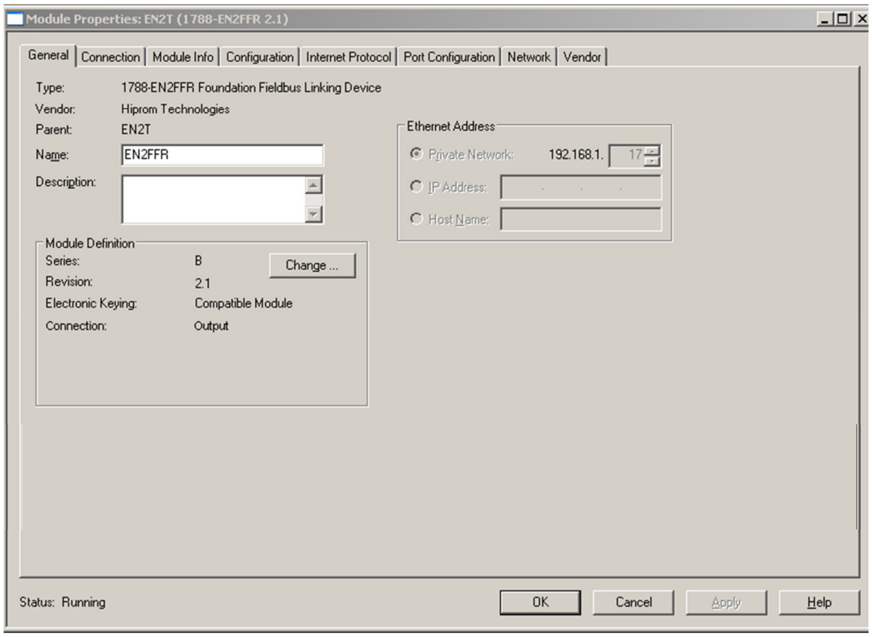


RSLogix 5000

Done downloading. Change controller mode back to Remote Run?

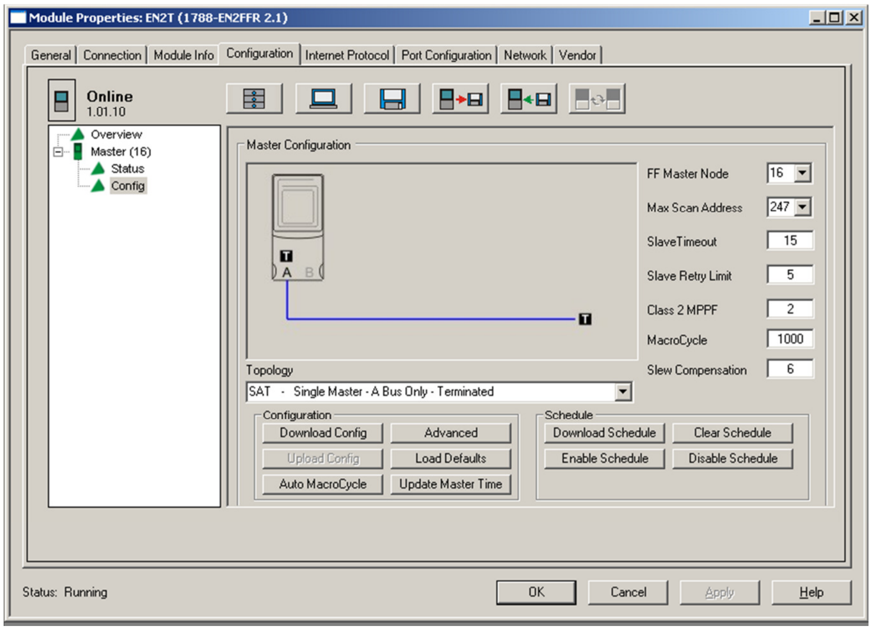
After the modules are added to the I/O tree, the user can open the module properties by right clicking the device and selecting **Properties** from the pop-up menu. In the properties window, select the Configuration tab to configure addition settings.

17. On the I/O tree, right click on the **EN2FFR** and click **Properties**. The module properties will appear as below. Select the **Configuration** tab.


Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Ethernet Address
Private Network:
IP Address:
Host Name:
Module Definition
Change ...
OK
Cancel
Apply
Help

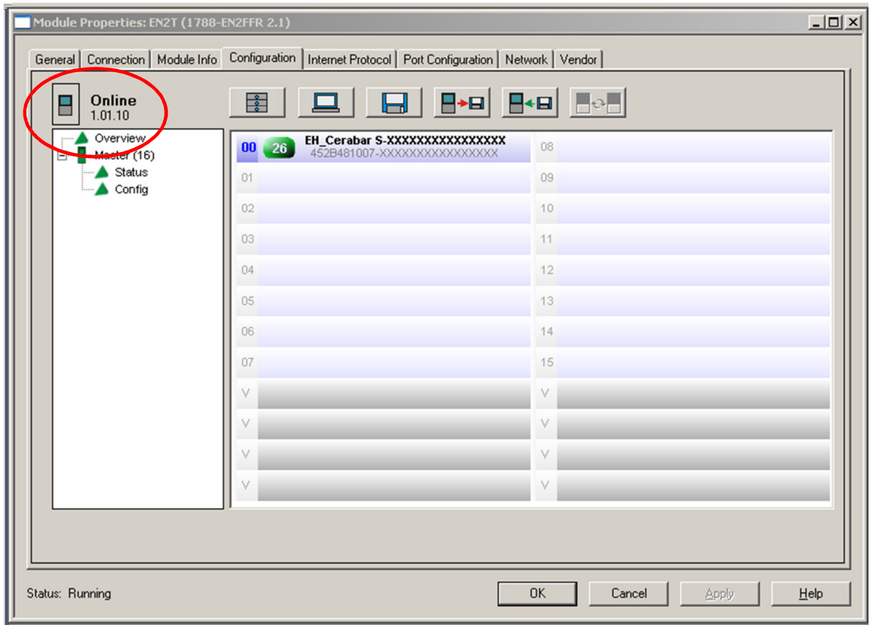
Type: 1788-EN2FFR Foundation Fieldbus Linking Device
Vendor: Hiprom Technologies
Parent: EN2T
Name: EN2FFR
Description:
Private Network: 192.168.1. 17
Series: B
Revision: 2.1
Electronic Keying: Compatible Module
Connection: Output
Status: Running

18. Select **Master**, then **Config** from the tree on the left.


Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Online
1.01.10
Overview
Master (16)
Status
Config
Master Configuration
T
A
B
T
Topology
Configuration
Download Config
Advanced
Upload Config
Load Defaults
Auto MacroCycle
Update Master Time
Schedule
Download Schedule
Clear Schedule
Enable Schedule
Disable Schedule
OK
Cancel
Apply
Help

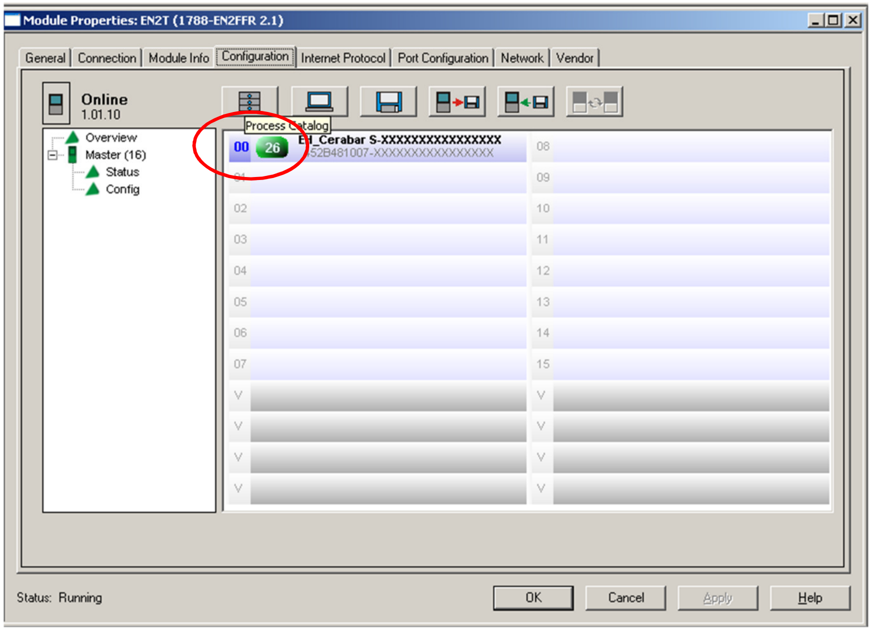
FF Master Node 16
Max Scan Address 247
SlaveTimeout 15
Slave Retry Limit 5
Class 2 MPPF 2
MacroCycle 1000
Slew Compensation 6
Topology: SAT - Single Master - A Bus Only - Terminated
Status: Running

19. Verify the “Online” status in the upper left corner of the window.

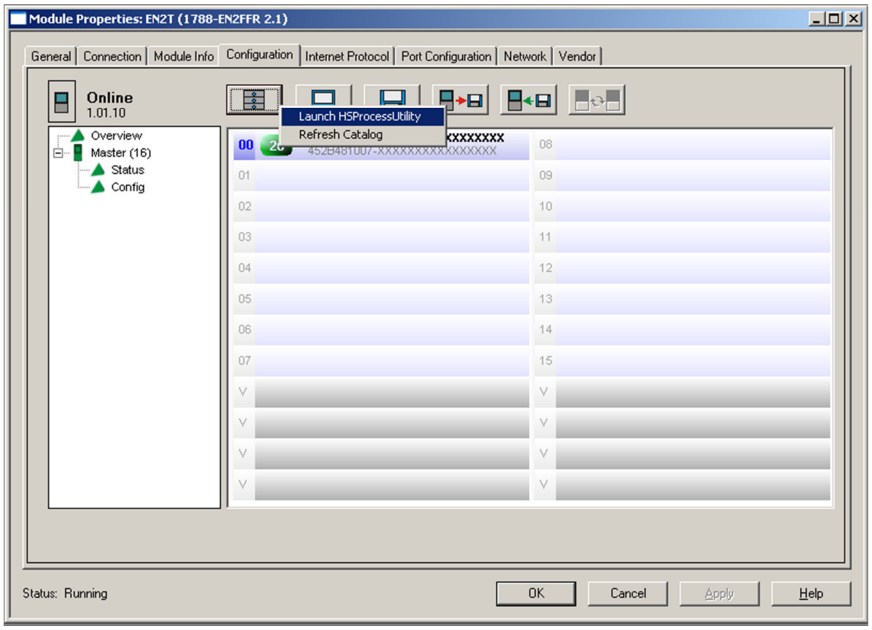

Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Online
1.01.10
Overview
Master (16)
Status
Config
00
26
EH_Cerabar S-XXXXXXXXXXXXXXXX
452B481007-XXXXXXXXXXXXXXXX
Status: Running
OK
Cancel
Apply
Help

IMPORTANT Device Description files are normally included in the installation of the AOP. The following steps, 19- 23, are only necessary if you need to download the DD (Device Description) file. If not, proceed with the next section, “Deltabar S” Configuration in RSLogix 5000.

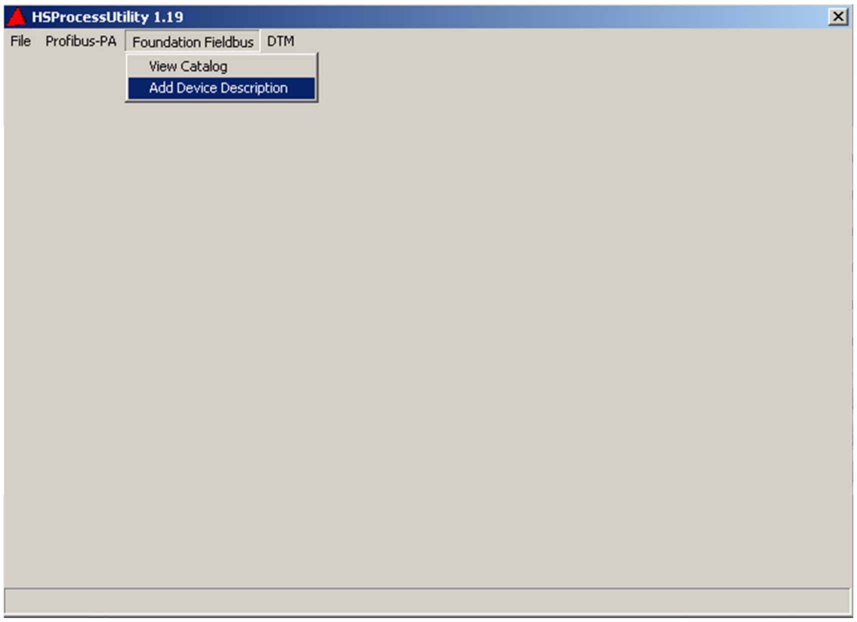
20. From the **Configuration** tab in the EN2FFR Properties window, click on the **Process Catalog** button near the top of the window.


Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Online
1.01.10
Process Catalog
Overview
Master (16)
Status
Config
00
26
EH_Cerabar S-XXXXXXXXXXXXXXXX
452B481007-XXXXXXXXXXXXXXXX
Status: Running
OK
Cancel
Apply
Help

21. Select **Launch Process Utility** from the menu.


Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Online
1.01.10
Overview
Master (16)
Status
Config
Launch HSProcessUtility
Refresh Catalog
00
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15
Status: Running
OK
Cancel
Apply
Help

22. From the HS Process Utility select **FOUNDATION Fieldbus** and select **Add Device Description**.

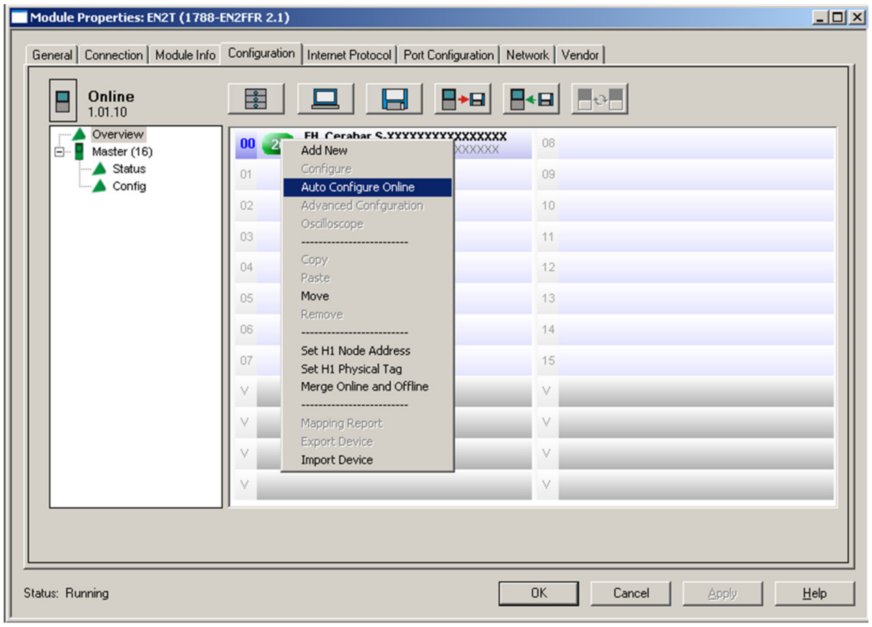

HSProcessUtility 1.19
File
Profibus-PA
Foundation Fieldbus
DTM
View Catalog
Add Device Description

23. Select the DD files that you wish to install from the list.

Cerabar S Configuration in RSLogix 5000

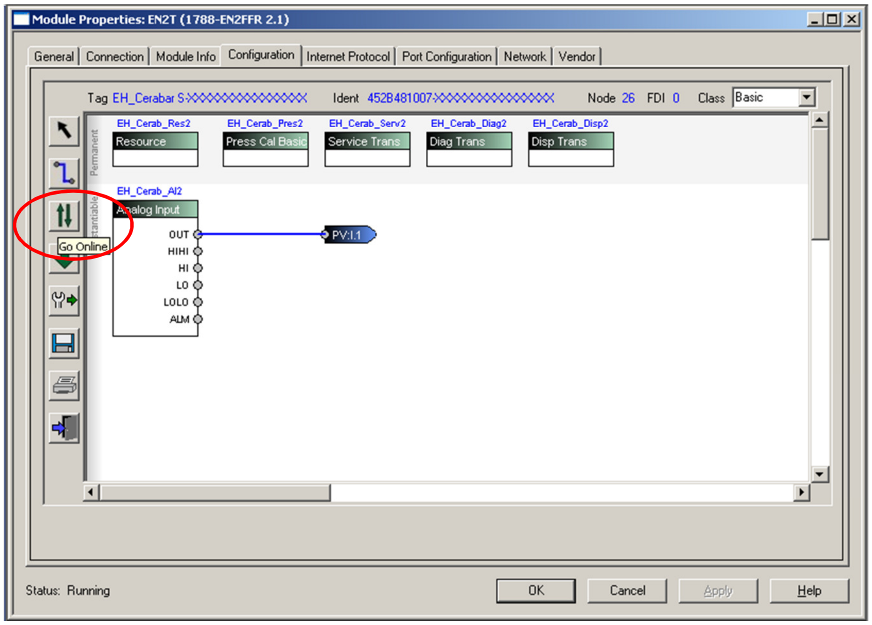
The following steps allow the user to configure, download, and verify available data for the Cerabar S Pressure Transmitter.

1. Right click on the **Cerabar S** device and select **Auto Configure Online**.


Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Online
1.01.10
Overview
Master (16)
Status
Config
00
EH_Cerabar S-XXXXXXXXXXXXXXXX
XXXXXX
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15
Add New
Configure
Auto Configure Online
Advanced Confguration
Oscilloscope
Copy
Paste
Move
Remove
Set H1 Node Address
Set H1 Physical Tag
Merge Online and Offline
Mapping Report
Export Device
Import Device
OK
Cancel
Apply
Help

Status: Running

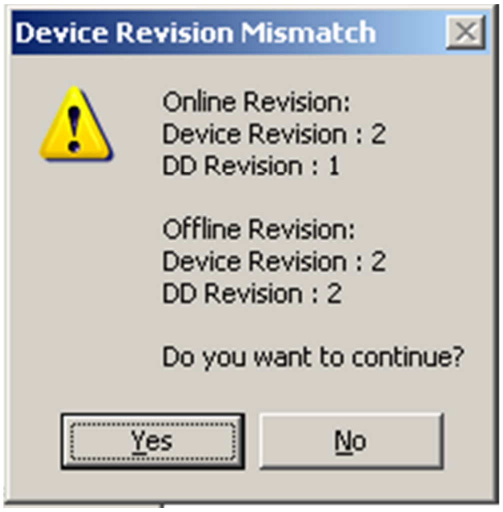
2. Go online by clicking the **Double Green Arrows** button on the left of the screen.


Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Permanent
Instantiable
EH_Cerab_Res2
Resource
EH_Cerab_Pres2
Press Cal Basic
EH_Cerab_Serv2
Service Trans
EH_Cerab_Diag2
Diag Trans
EH_Cerab_Disp2
Disp Trans
EH_Cerab_AI2
Analog Input
OUT
HIHI
HI
LO
LOLO
ALM
PV:I.1
Go Online
OK
Cancel
Apply
Help

Tag EH_Cerabar S-XXXXXXXXXXXXXXXX Ident 452B481007-XXXXXXXXXXXXXXXX Node 26 FDI 0 Class Basic

Status: Running

3. Click **Yes** on the following warning screen (if it appears) if you are sure you wish to change the device revision in the project.


Device Revision Mismatch

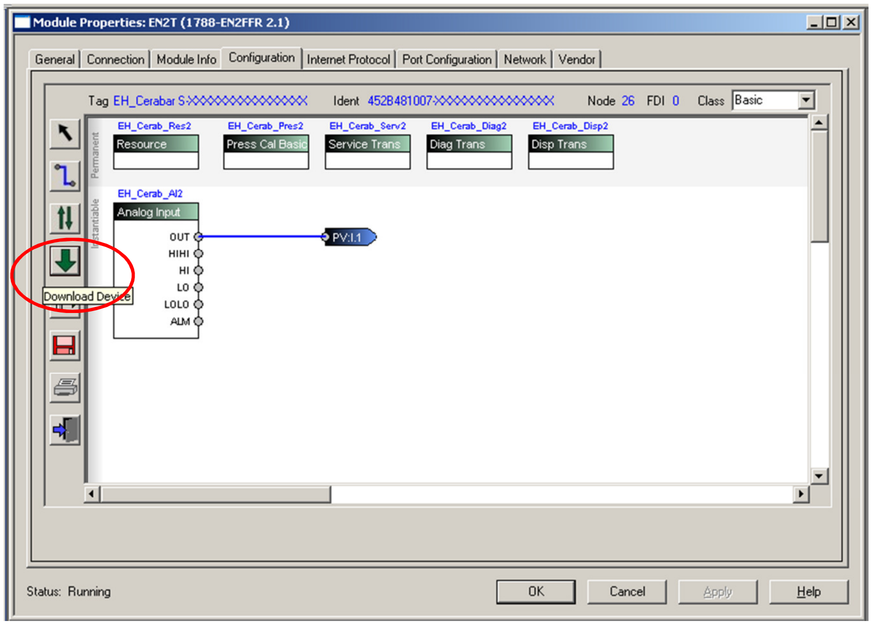
Online Revision:
Device Revision : 2
DD Revision : 1

Offline Revision:
Device Revision : 2
DD Revision : 2

Do you want to continue?

Yes
No

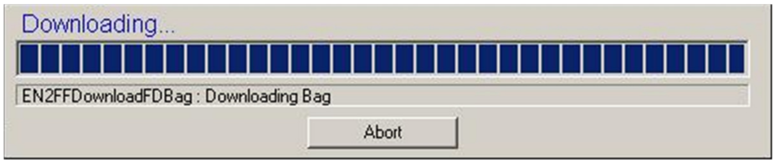
4. Download the configuration to the Cerabar S by clicking the **Large Green Arrow** button.


Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Permanent
Instantiable
EH_Cerab_Res2
Resource
EH_Cerab_Pres2
Press Cal Basic
EH_Cerab_Serv2
Service Trans
EH_Cerab_Diag2
Diag Trans
EH_Cerab_Disp2
Disp Trans
EH_Cerab_AI2
Analog Input
OUT
HIHI
HI
LO
LOLO
ALM
PV:I.1
Download Device
OK
Cancel
Apply
Help

Tag EH_Cerabar S-XXXXXXXXXXXXXXXX Ident 452B481007-XXXXXXXXXXXXXXXX Node 26 FDI 0 Class Basic

Status: Running

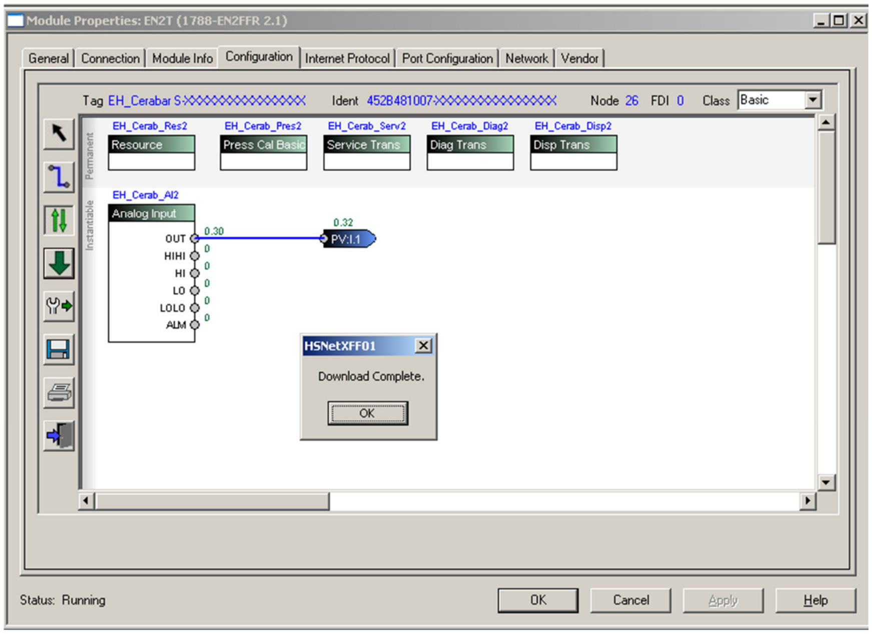
You should see a progress bar as below.



Downloading...

EN2FFDownloadFDBag : Downloading Bag

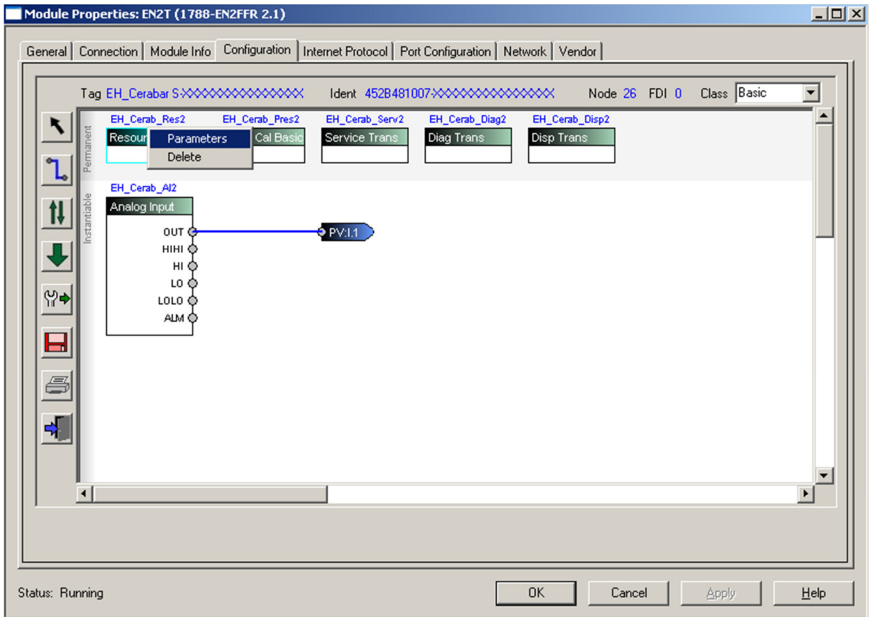
5. When the download is complete, click **OK**.


Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Tag EH_Cerabar S-XXXXXXXXXXXXXX
Ident 452B481007-XXXXXXXXXXXXXXX
Node 26
FDI 0
Class Basic
Permanent
Instantiable
EH_Cerab_Res2
Resource
EH_Cerab_Pres2
Press Cal Basic
EH_Cerab_Serv2
Service Trans
EH_Cerab_Diag2
Diag Trans
EH_Cerab_Disp2
Disp Trans
EH_Cerab_AI2
Analog Input
OUT
HIHI
HI
LO
LOLO
ALM
0.30
0
0
0
0
0
0.32
PV:I.1
HSNetXFF01
OK
Cancel
Apply
Help

Download Complete.

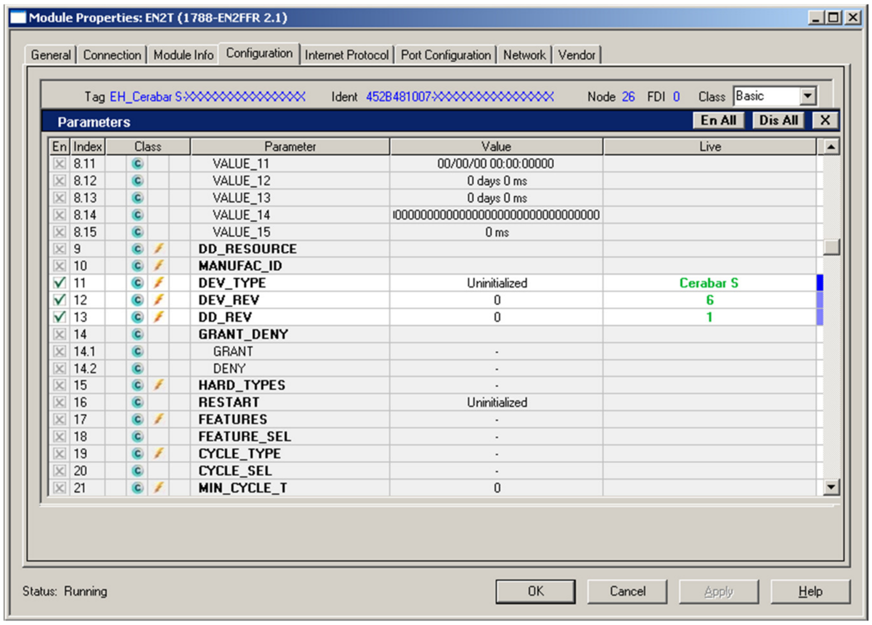
Status: Running

6. To verify the device configuration and revision information, right click on the **Resource Block** and select **Parameters**.


Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Tag EH_Cerabar S-XXXXXXXXXXXXXX
Ident 452B481007-XXXXXXXXXXXXXXX
Node 26
FDI 0
Class Basic
Permanent
Instantiable
EH_Cerab_Res2
Resour
Parameters
Delete
EH_Cerab_Pres2
Cal Basic
EH_Cerab_Serv2
Service Trans
EH_Cerab_Diag2
Diag Trans
EH_Cerab_Disp2
Disp Trans
EH_Cerab_AI2
Analog Input
OUT
HIHI
HI
LO
LOLO
ALM
PV:I.1
OK
Cancel
Apply
Help

Status: Running

7. Select parameters that wish to enable by checking the boxes on the left.


Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Parameters
En All
Dis All
X
OK
Cancel
Apply
Help

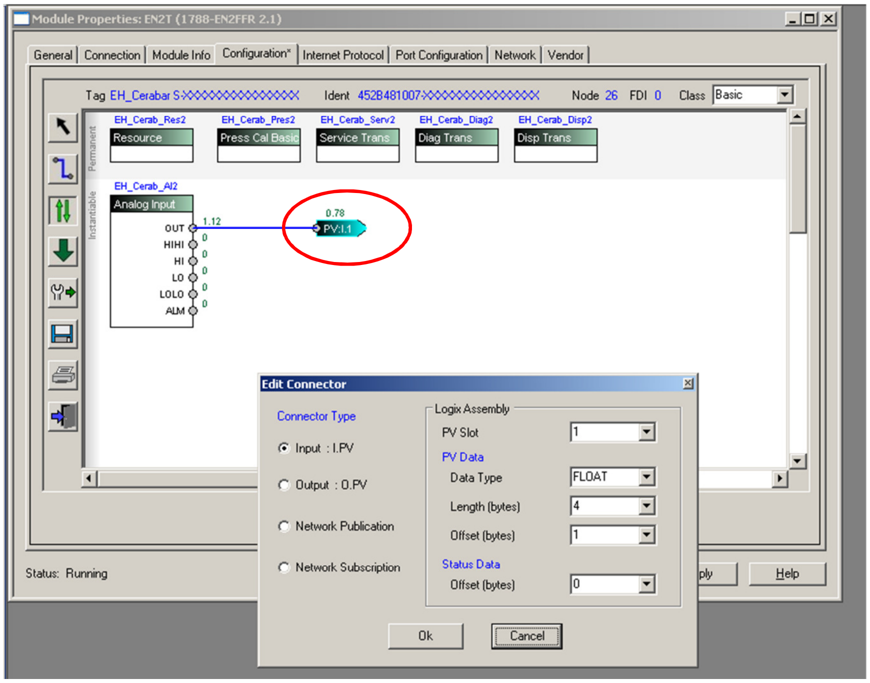
Tag EH_Cerabar S-XXXXXXXXXXXXXXXX Ident 452B481007-XXXXXXXXXXXXXXXX Node 26 FDI 0 Class Basic

En	Index	Class	Parameter	Value	Live
☒	8.11	C	VALUE_11	00/00/00 00:00:00000	
☒	8.12	C	VALUE_12	0 days 0 ms	
☒	8.13	C	VALUE_13	0 days 0 ms	
☒	8.14	C	VALUE_14	I00000000000000000000000000000000	
☒	8.15	C	VALUE_15	0 ms	
☒	9	C ⚡	DD_RESOURCE		
☒	10	C ⚡	MANUFAC_ID		
✓	11	C ⚡	DEV_TYPE	Uninitialized	Cerabar S
✓	12	C ⚡	DEV_REV	0	6
✓	13	C ⚡	DD_REV	0	1
☒	14	C	GRANT_DENY		
☒	14.1	C	GRANT	-	
☒	14.2	C	DENY	-	
☒	15	C ⚡	HARD_TYPES	-	
☒	16	C	RESTART	Uninitialized	
☒	17	C ⚡	FEATURES	-	
☒	18	C	FEATURE_SEL	-	
☒	19	C ⚡	CYCLE_TYPE	-	
☒	20	C	CYCLE_SEL	-	
☒	21	C ⚡	MIN_CYCLE_T	0	

Status: Running

The following steps will demonstrate setup of the analog parameters for the Cerabar S.

8. Right click on the **Process Variable** and select **Attributes**.


Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration*
Internet Protocol
Port Configuration
Network
Vendor
Permanent
Instantiable
EH_Cerab_Res2
Resource
EH_Cerab_Pres2
Press Cal Basic
EH_Cerab_Serv2
Service Trans
EH_Cerab_Diag2
Diag Trans
EH_Cerab_Disp2
Disp Trans
EH_Cerab_AI2
Analog Input
OUT
HIHI
HI
LO
LOLO
ALM
1.12
0
0
0
0
0
0.78
PV:I.1
Help
Ok
Cancel

Tag EH_Cerabar S-XXXXXXXXXXXXXXXX Ident 452B481007-XXXXXXXXXXXXXXXX Node 26 FDI 0 Class Basic

Status: Running

Edit Connector

Connector Type

● Input : I.PV

○ Output : O.PV

○ Network Publication

○ Network Subscription

Logix Assembly

PV Slot: 1

PV Data

Data Type: FLOAT

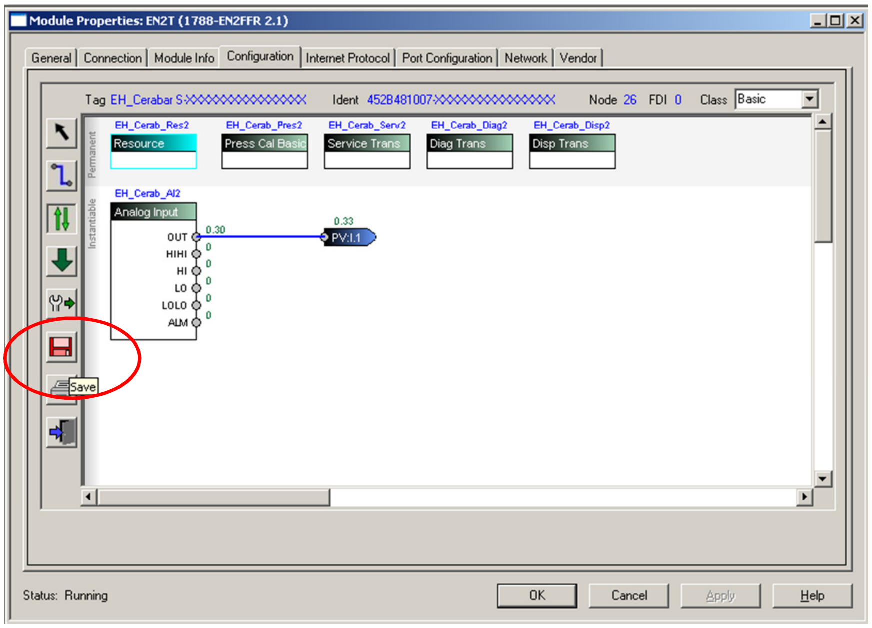
Length (bytes): 4

Offset (bytes): 1

Status Data

Offset (bytes): 0

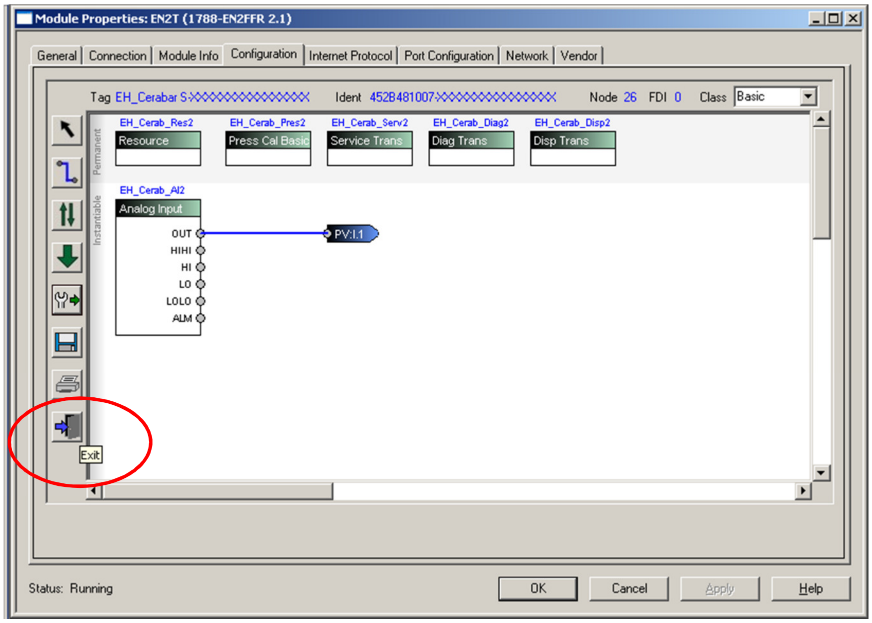
9. Save by clicking the **Disk** button.


Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Permanent
Instantiable
EH_Cerab_Res2
Resource
EH_Cerab_Pres2
Press Cal Basic
EH_Cerab_Serv2
Service Trans
EH_Cerab_Diag2
Diag Trans
EH_Cerab_Disp2
Disp Trans
EH_Cerab_AI2
Analog Input
OUT
HIHI
HI
LO
LOLO
ALM
0.30
0.33
PV:I.1
Save
OK
Cancel
Apply
Help

Tag EH_Cerabar S-XXXXXXXXXXXXXXX Ident 452B481007-XXXXXXXXXXXXXXX Node 26 FDI 0 Class Basic

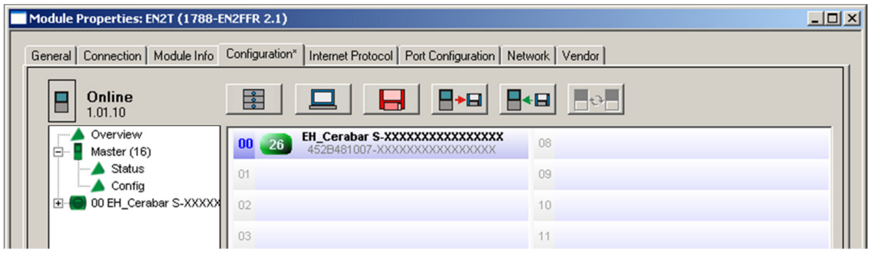
Status: Running

10. Click **Exit** to return to the configuration screen. The Cerabar S will be available on the RSLogix I/O tree.

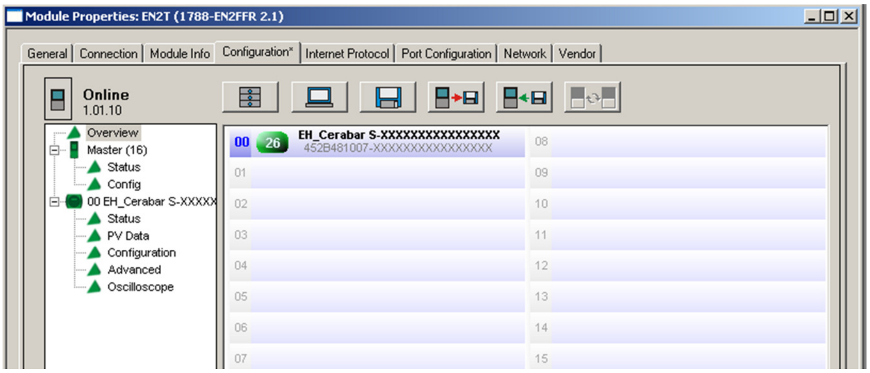

Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Permanent
Instantiable
EH_Cerab_Res2
Resource
EH_Cerab_Pres2
Press Cal Basic
EH_Cerab_Serv2
Service Trans
EH_Cerab_Diag2
Diag Trans
EH_Cerab_Disp2
Disp Trans
EH_Cerab_AI2
Analog Input
OUT
HIHI
HI
LO
LOLO
ALM
PV:I.1
Exit
OK
Cancel
Apply
Help

Tag EH_Cerabar S-XXXXXXXXXXXXXXX Ident 452B481007-XXXXXXXXXXXXXXX Node 26 FDI 0 Class Basic

Status: Running

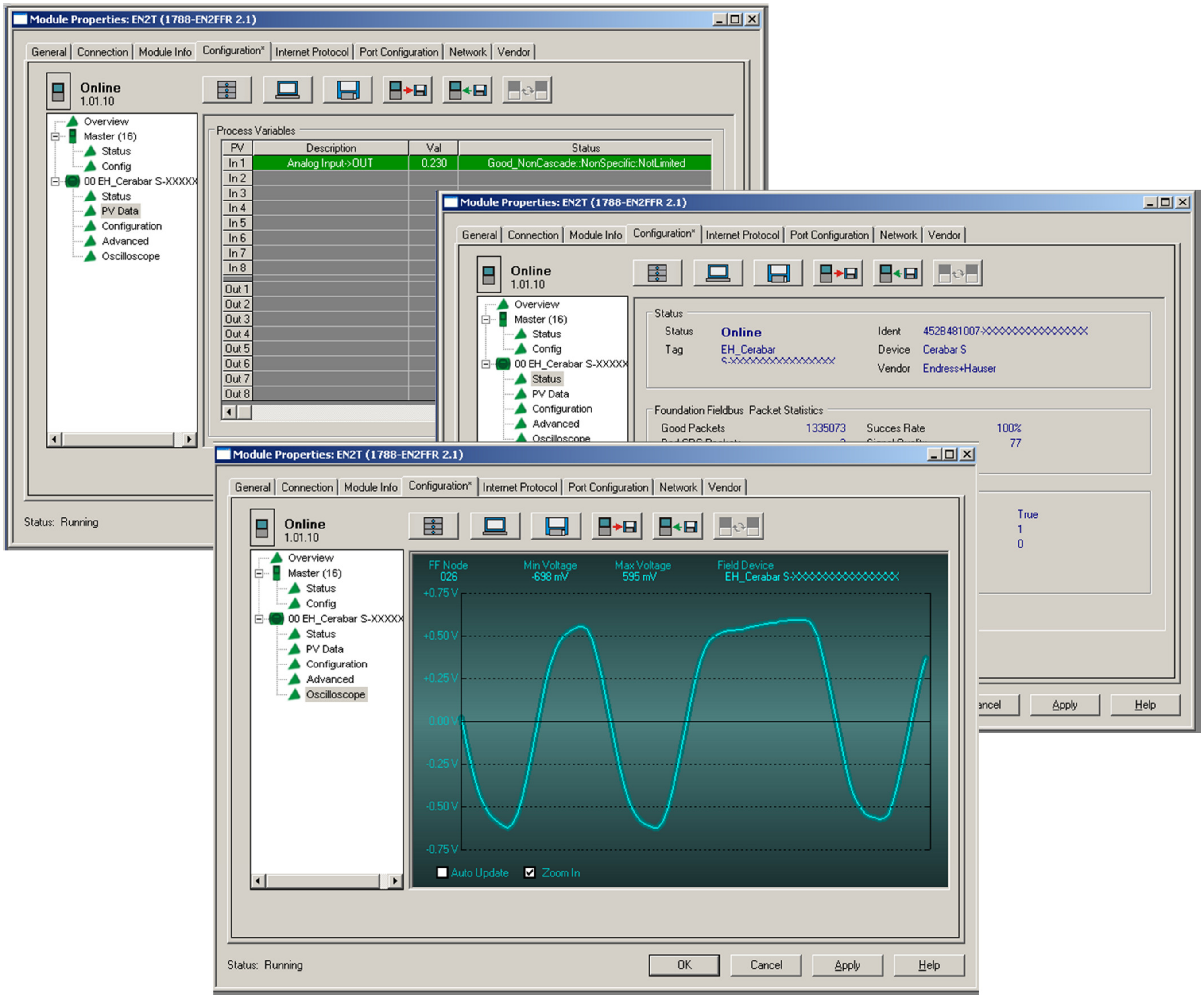

Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration*
Internet Protocol
Port Configuration
Network
Vendor
Online
1.01.10
Overview
Master (16)
Status
Config
00 EH_Cerabar S-XXXXX
00
26
EH_Cerabar S-XXXXXXXXXXXXXXX
452B481007-XXXXXXXXXXXXXXX
01
02
03
08
09
10
11

11. Expand the Cerabar S tree by clicking the **plus sign**.


Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration*
Internet Protocol
Port Configuration
Network
Vendor
Online
1.01.10
Overview
Master (16)
Status
Config
00 EH_Cerabar S-XXXXX
Status
PV Data
Configuration
Advanced
Oscilloscope
00
26
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15

EH_Cerabar S-XXXXXXXXXXXXXXXX
452B481007-XXXXXXXXXXXXXXXX

12. Click on the attributes below the Cerabar S in the tree to view available data about the device. Screen examples are shown below.


Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration*
Internet Protocol
Port Configuration
Network
Vendor
Online
1.01.10
Overview
Master (16)
Status
Config
00 EH_Cerabar S-XXXXX
Status
PV Data
Configuration
Advanced
Oscilloscope
Cancel
Apply
Help
OK
+0.75 V
+0.50 V
+0.25 V
0.00 V
-0.25 V
-0.50 V
-0.75 V

Process Variables

PV	Description	Val	Status
In 1	Analog Input->OUT	0.230	Good_NonCascade::NonSpecific:NotLimited
In 2			
In 3			
In 4			
In 5			
In 6			
In 7			
In 8			
Out 1			
Out 2			
Out 3			
Out 4			
Out 5			
Out 6			
Out 7			
Out 8			

Status: Running

Status

Status	Online	Ident	452B481007-XXXXXXXXXXXXXXXX
Tag	EH_Cerabar S-XXXXXXXXXXXXXXXX	Device	Cerabar S
		Vendor	Endress+Hauser

Foundation Fieldbus Packet Statistics

Good Packets	1335073	Succes Rate	100%
			77

True
1
0

FF Node 026
Min Voltage -698 mV
Max Voltage 595 mV
Field Device EH_Cerabar S-XXXXXXXXXXXXXXXX

☐ Auto Update ☑ Zoom In

Status: Running

13. When finished viewing the device data, click **OK** to close the window.

IMPORTANT Remember to save the RSLogix 5000 project to avoid losing the changes!

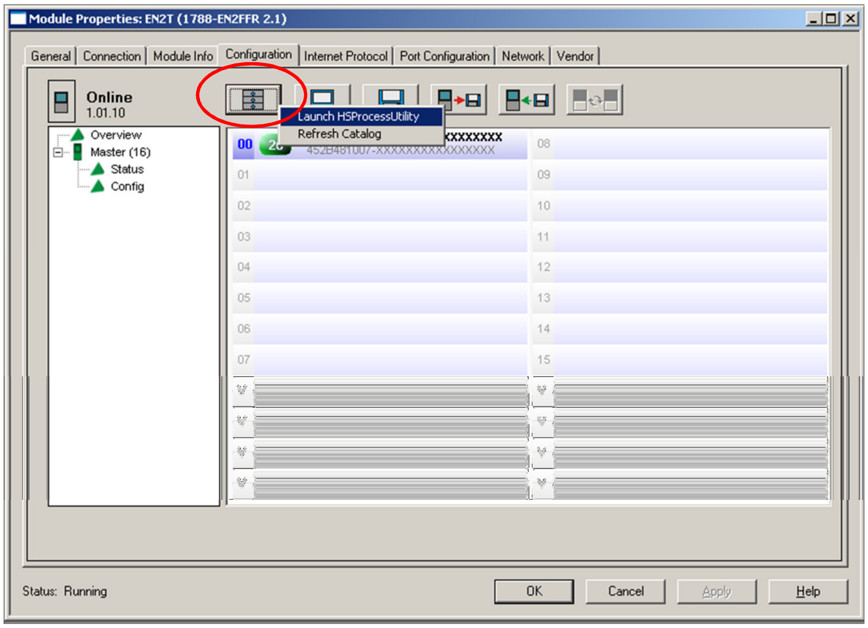
Alternate Installation using the Thin Frame

In most cases, DTM files are included with the installation of the AOP and can be used in the Thin Frame included in RSLogix 5000 or with a FDT Frame (such as AssetCentre or FieldCare).. There may be an instance where the user may need to install or re-install one or more DTMs. This section of the manual will walk you through the installation process using RSLogix 5000.

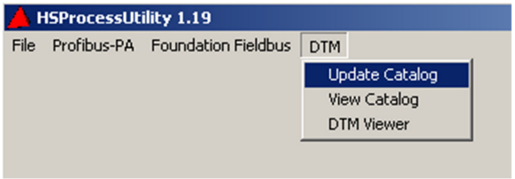
IMPORTANT The Thin Frame can only view diagnostics of the field device. A full FDT Frame is needed to configure and parameterize the field device.

In order to use RSLogix 5000 to install DTMs, the user must update the DTM catalog by launching the Process Utility in the EN2FFR module properties window, configuration tab.

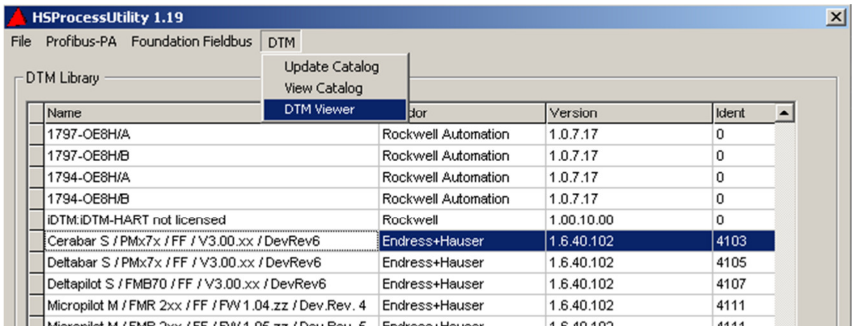
1. Right click on Process Catalog and select Launch Process Utility.


Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Online
1.01.10
Launch HSProcessUtility
Refresh Catalog
Overview
Master (16)
Status
Config
00
xxxxxxxx
452B481007-XXXXXXXXXXXXXXXX
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15
Status: Running
OK
Cancel
Apply
Help

2. So that the DTM library is updated with all available DTMs, click **DTM** and **Update Catalog** on the utility screen.


HSProcessUtility 1.19
File
Profibus-PA
Foundation Fieldbus
DTM
Update Catalog
View Catalog
DTM Viewer

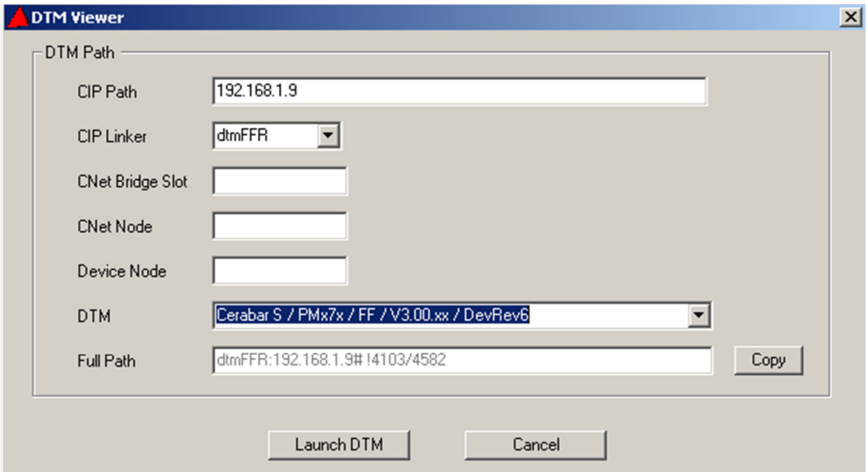
3. After the update is finished, click **DTM** and select **DTM Viewer** from the menu.


HSProcessUtility 1.19
File
Profibus-PA
Foundation Fieldbus
DTM
Update Catalog
View Catalog
DTM Viewer
DTM Library

Name	dor	Version	Ident
1797-OE8H/A	Rockwell Automation	1.0.7.17	0
1797-OE8H/B	Rockwell Automation	1.0.7.17	0
1794-OE8H/A	Rockwell Automation	1.0.7.17	0
1794-OE8H/B	Rockwell Automation	1.0.7.17	0
iDTM:iDTM-HART not licensed	Rockwell	1.00.10.00	0
Cerabar S / PMx7x / FF / V3.00.xx / DevRev6	Endress+Hauser	1.6.40.102	4103
Deltabar S / PMx7x / FF / V3.00.xx / DevRev6	Endress+Hauser	1.6.40.102	4105
Deltapilot S / FMB70 / FF / V3.00.xx / DevRev6	Endress+Hauser	1.6.40.102	4107
Micropilot M / FMR 2xx / FF / FW 1.04.zz / Dev.Rev. 4	Endress+Hauser	1.6.40.102	4111

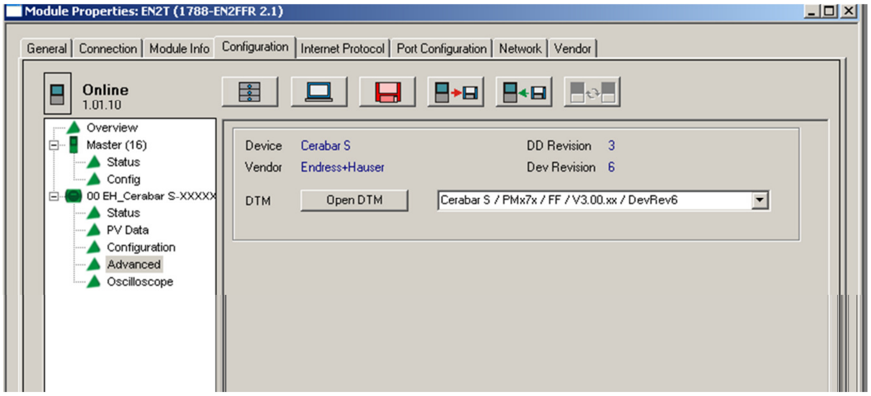
IMPORTANT Multiple DTMs for the same device with different revisions may be available. The user must select the correct revision for the specified device.

4. Select the DTM that you need from the list and click the **Launch DTM** button.


DTM Viewer
DTM Path
Copy
Launch DTM
Cancel

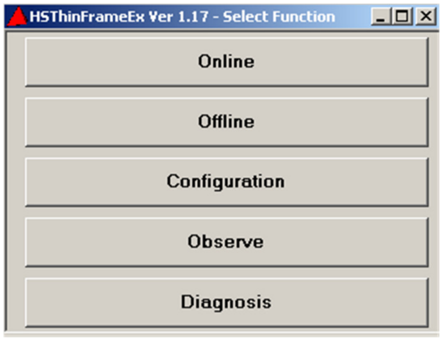
CIP Path: 192.168.1.9
CIP Linker: dtmFFR
CNet Bridge Slot:
CNet Node:
Device Node:
DTM: Cerabar S / PMx7x / FF / V3.00.xx / DevRev6
Full Path: dtmFFR:192.168.1.9# !4103/4582

5. Or select the **Advance** attribute on the EN2FFR properties configuration tab to find and open the DTM.

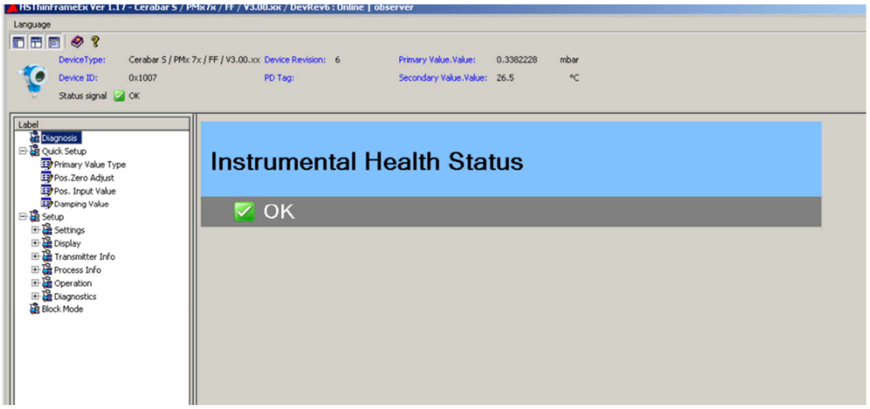

Module Properties: EN2T (1788-EN2FFR 2.1)
General
Connection
Module Info
Configuration
Internet Protocol
Port Configuration
Network
Vendor
Online
1.01.10
Overview
Master (16)
Status
Config
00 EH_Cerabar S-XXXXX
Status
PV Data
Configuration
Advanced
Oscilloscope
Open DTM

Device Cerabar S
Vendor Endress+Hauser
DD Revision 3
Dev Revision 6
DTM Cerabar S / PMx7x / FF / V3.00.xx / DevRev6

6. Use the DTM to go online buy selecting the **Online** button below.


HSThinFrameEx Ver 1.17 - Select Function
Online
Offline
Configuration
Observe
Diagnosis

7. After the DTM goes online with the device, the following screen will appear.


HSThinFrameEx Ver 1.17 - Cerabar S / PMx7x / FF / V3.00.xx / DevRev6 : Online | observer
Language
Label
Diagnosis
Quick Setup
Primary Value Type
Pos.Zero Adjust
Pos. Input Value
Damping Value
Setup
Settings
Display
Transmitter Info
Process Info
Operation
Diagnostics
Block Mode

DeviceType: Cerabar S / PMx 7x / FF / V3.00.xx
Device Revision: 6
Primary Value.Value: 0.3382228 mbar
Device ID: 0x1007
PD Tag:
Secondary Value.Value: 26.5 °C
Status signal ✓ OK

Instrumental Health Status
✓ OK

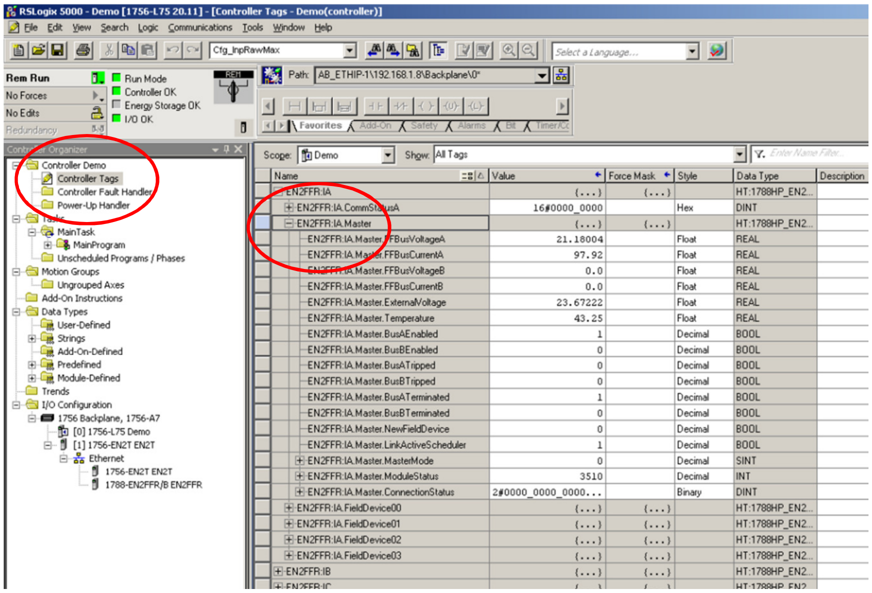
8. Save the project.

Verify Operation Using RSLogix 5000

Each 1788-EN2FFR consumes a total of 4 connections from the Logix Controller regardless of the number of field devices. Thus the input and output image of each EN2FFR is divided into four sections A to D. The first connection will have the FF Master Data.

The following section will show the user how to use the AOP to monitor online data.

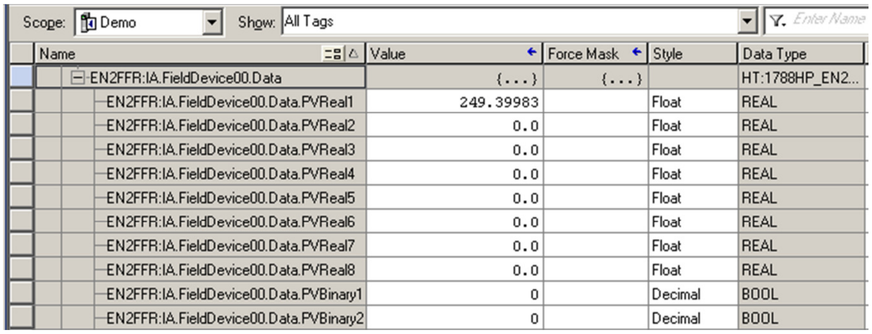
1. In the RSLogix 5000 tree, select **Controller Tags**. Then select **EN2FFR:IA**, then **Master**.



Name	Value	Force Mask	Style	Data Type	Description
EN2FFR:IA	{...}	{...}		HT:1788HP_EN2...	
EN2FFR:IA.CommStatusA	16#0000_0000		Hex	DINT	
EN2FFR:IA.Master	{...}	{...}		HT:1788HP_EN2...	
EN2FFR:IA.Master.FFBusVoltageA	21.18004		Float	REAL	
EN2FFR:IA.Master.FFBusCurrentA	97.92		Float	REAL	
EN2FFR:IA.Master.FFBusVoltageB	0.0		Float	REAL	
EN2FFR:IA.Master.FFBusCurrentB	0.0		Float	REAL	
EN2FFR:IA.Master.ExternalVoltage	23.67222		Float	REAL	
EN2FFR:IA.Master.Temperature	43.25		Float	REAL	
EN2FFR:IA.Master.BusAEnabled	1		Decimal	BOOL	
EN2FFR:IA.Master.BusBEnabled	0		Decimal	BOOL	
EN2FFR:IA.Master.BusATripped	0		Decimal	BOOL	
EN2FFR:IA.Master.BusBTripped	0		Decimal	BOOL	
EN2FFR:IA.Master.BusATerminated	1		Decimal	BOOL	
EN2FFR:IA.Master.BusBTerminated	0		Decimal	BOOL	
EN2FFR:IA.Master.NewFieldDevice	0		Decimal	BOOL	
EN2FFR:IA.Master.LinkActiveScheduler	1		Decimal	BOOL	
EN2FFR:IA.Master.MasterMode	0		Decimal	SINT	
EN2FFR:IA.Master.ModuleStatus	3510		Decimal	INT	
EN2FFR:IA.Master.ConnectionStatus	2#0000_0000_0000...		Binary	DINT	
EN2FFR:IA.FieldDevice00	{...}	{...}		HT:1788HP_EN2...	
EN2FFR:IA.FieldDevice01	{...}	{...}		HT:1788HP_EN2...	
EN2FFR:IA.FieldDevice02	{...}	{...}		HT:1788HP_EN2...	
EN2FFR:IA.FieldDevice03	{...}	{...}		HT:1788HP_EN2...	
EN2FFR:IB	{...}	{...}		HT:1788HP_EN2...	

If a field device is online and running (exchanging cyclic data) then its field device index bit (in the connection status) will be set. If the device goes offline, the bit will be cleared.

2. Select the **plus sign** next to **Field Device 00** and click to expand **Data**. Each field device will display its diagnostics as well as all available PVs and their status as shown below.



Scope: Demo Show: All Tags

Name	Value	Force Mask	Style	Data Type
EN2FFR:IA.FieldDevice00.Data	{...}	{...}		HT:1788HP_EN2...
EN2FFR:IA.FieldDevice00.Data.PVReal1	249.39983		Float	REAL
EN2FFR:IA.FieldDevice00.Data.PVReal2	0.0		Float	REAL
EN2FFR:IA.FieldDevice00.Data.PVReal3	0.0		Float	REAL
EN2FFR:IA.FieldDevice00.Data.PVReal4	0.0		Float	REAL
EN2FFR:IA.FieldDevice00.Data.PVReal5	0.0		Float	REAL
EN2FFR:IA.FieldDevice00.Data.PVReal6	0.0		Float	REAL
EN2FFR:IA.FieldDevice00.Data.PVReal7	0.0		Float	REAL
EN2FFR:IA.FieldDevice00.Data.PVReal8	0.0		Float	REAL
EN2FFR:IA.FieldDevice00.Data.PVBinary1	0		Decimal	BOOL
EN2FFR:IA.FieldDevice00.Data.PVBinary2	0		Decimal	BOOL

Connect, Monitor, and Configure the Instrument via AssetCentre

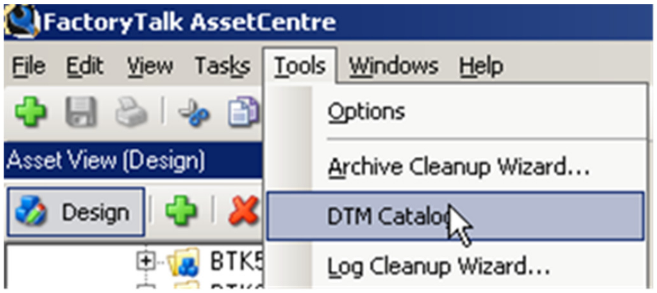
Rockwell's AssetCentre is the FDT based plant asset management software tool that lets you configure the intelligent field instruments for Endress+Hauser. FieldCare is an optional tool provided by Endress+Hauser.

IMPORTANT Before beginning this process, make sure the DTMs have been downloaded from the vendor website, imported, and installed for both the Hiprom EN2FFR and the E+H device.

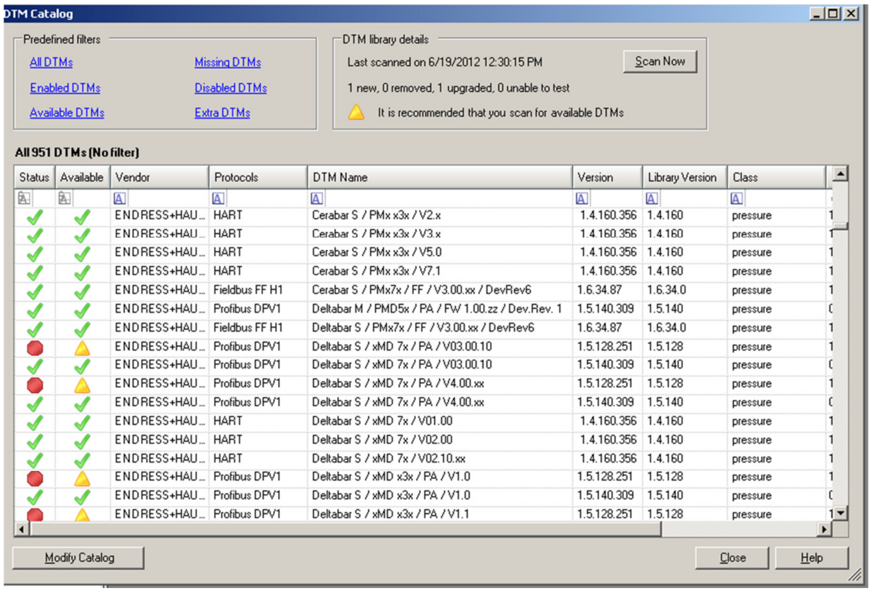
1. After installing the appropriate DTM files, start AssetCentre using the icon on the desktop and open a new project.

AssetCentre Client

2. Update the DTM catalog in AssetCentre by clicking on **Tools**, then **DTM Catalog**.


FactoryTalk AssetCentre
File
Edit
View
Tasks
Tools
Windows
Help
Asset View (Design)
Design
BTK5
Options
Archive Cleanup Wizard...
DTM Catalog
Log Cleanup Wizard...

3. Click **Scan Now** to verify that the DTMs you installed exist in the catalog.


DTM Catalog
Predefined filters
All DTMs
Missing DTMs
Enabled DTMs
Disabled DTMs
Available DTMs
Extra DTMs
DTM library details
Scan Now

Last scanned on 6/19/2012 12:30:15 PM

1 new, 0 removed, 1 upgraded, 0 unable to test

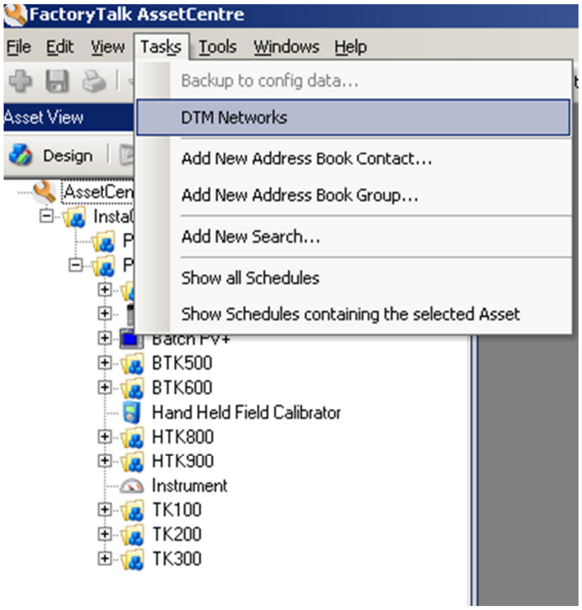
⚠ It is recommended that you scan for available DTMs

All 951 DTMs (No filter)

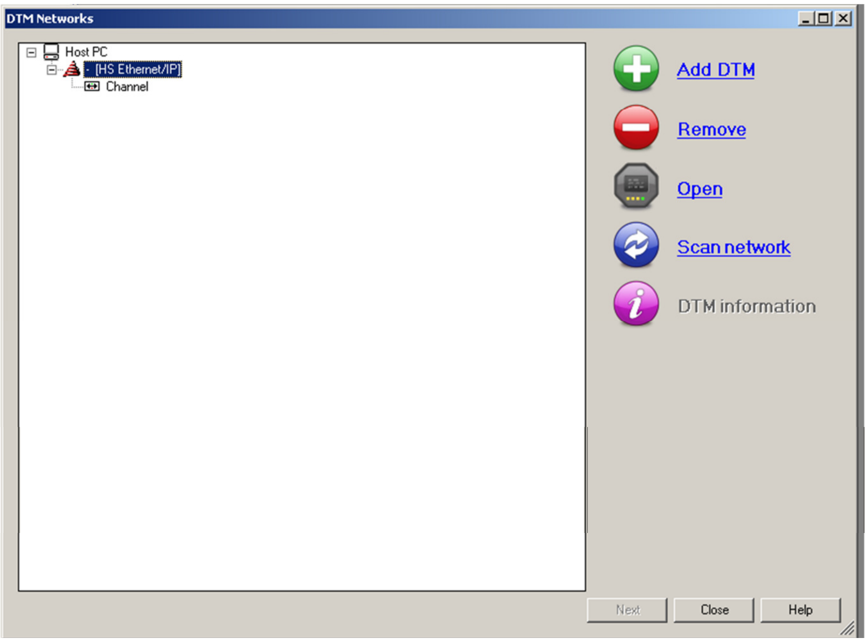
Status	Available	Vendor	Protocols	DTM Name	Version	Library Version	Class
✓	✓	ENDRESS+HAU...	HART	Cerabar S / PMx x3x / V2.x	1.4.160.356	1.4.160	pressure
✓	✓	ENDRESS+HAU...	HART	Cerabar S / PMx x3x / V3.x	1.4.160.356	1.4.160	pressure
✓	✓	ENDRESS+HAU...	HART	Cerabar S / PMx x3x / V5.0	1.4.160.356	1.4.160	pressure
✓	✓	ENDRESS+HAU...	HART	Cerabar S / PMx x3x / V7.1	1.4.160.356	1.4.160	pressure
✓	✓	ENDRESS+HAU...	Fieldbus FF H1	Cerabar S / PMx7x / FF / V3.00.xx / DevRev6	1.6.34.87	1.6.34.0	pressure
✓	✓	ENDRESS+HAU...	Profibus DPV1	Deltabar M / PMD5x / PA / FW 1.00.zz / Dev.Rev. 1	1.5.140.309	1.5.140	pressure
✓	✓	ENDRESS+HAU...	Fieldbus FF H1	Deltabar S / PMx7x / FF / V3.00.xx / DevRev6	1.6.34.87	1.6.34.0	pressure
●	△	ENDRESS+HAU...	Profibus DPV1	Deltabar S / xMD 7x / PA / V03.00.10	1.5.128.251	1.5.128	pressure
✓	✓	ENDRESS+HAU...	Profibus DPV1	Deltabar S / xMD 7x / PA / V03.00.10	1.5.140.309	1.5.140	pressure
●	△	ENDRESS+HAU...	Profibus DPV1	Deltabar S / xMD 7x / PA / V4.00.xx	1.5.128.251	1.5.128	pressure
✓	✓	ENDRESS+HAU...	Profibus DPV1	Deltabar S / xMD 7x / PA / V4.00.xx	1.5.140.309	1.5.140	pressure
✓	✓	ENDRESS+HAU...	HART	Deltabar S / xMD 7x / V01.00	1.4.160.356	1.4.160	pressure
✓	✓	ENDRESS+HAU...	HART	Deltabar S / xMD 7x / V02.00	1.4.160.356	1.4.160	pressure
✓	✓	ENDRESS+HAU...	HART	Deltabar S / xMD 7x / V02.10.xx	1.4.160.356	1.4.160	pressure
●	△	ENDRESS+HAU...	Profibus DPV1	Deltabar S / xMD x3x / PA / V1.0	1.5.128.251	1.5.128	pressure
✓	✓	ENDRESS+HAU...	Profibus DPV1	Deltabar S / xMD x3x / PA / V1.0	1.5.140.309	1.5.140	pressure
●	△	ENDRESS+HAU...	Profibus DPV1	Deltabar S / xMD x3x / PA / V1.1	1.5.128.251	1.5.128	pressure

Modify Catalog
Close
Help

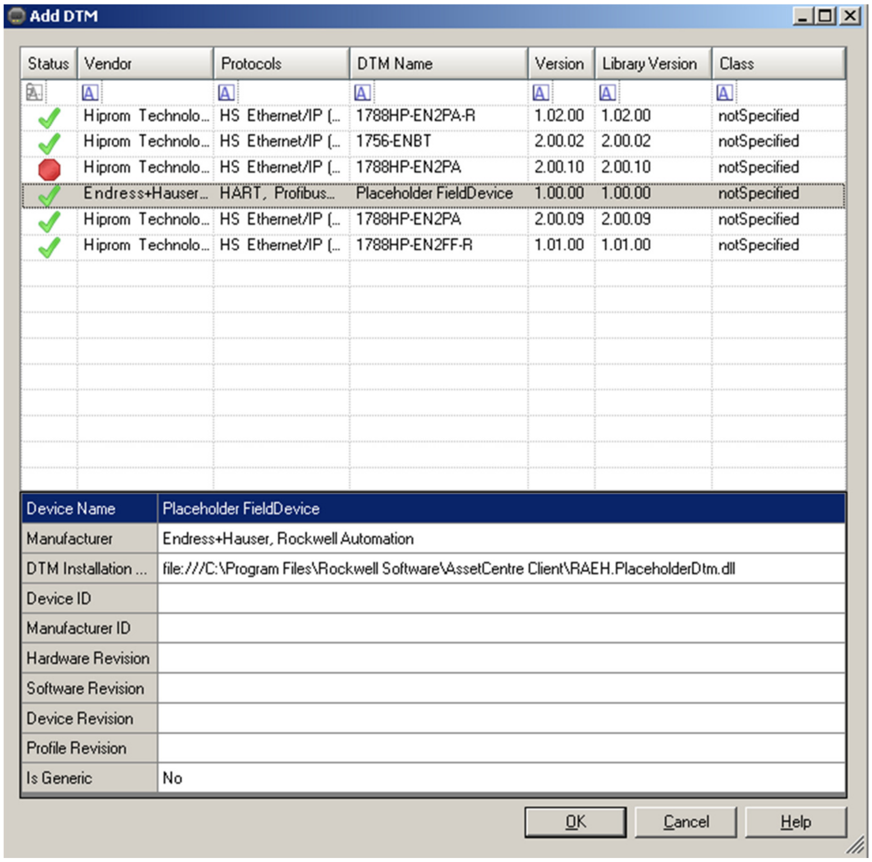
4. Close the DTM catalog and setup the DTM network path. Click the **Tasks** menu, then click **DTM Networks**.


FactoryTalk AssetCentre
File Edit View Tasks Tools Windows Help
Asset View
Design
AssetCen
Insta
Backup to config data...
DTM Networks
Add New Address Book Contact...
Add New Address Book Group...
Add New Search...
Show all Schedules
Show Schedules containing the selected Asset
Batch PV+
BTK500
BTK600
Hand Held Field Calibrator
HTK800
HTK900
Instrument
TK100
TK200
TK300

5. Click on the name of the DTM network on the tree to the left, then click **Add DTM**.


DTM Networks
Host PC
- [HS Ethernet/IP]
Channel
Add DTM
Remove
Open
Scan network
DTM information
Next
Close
Help

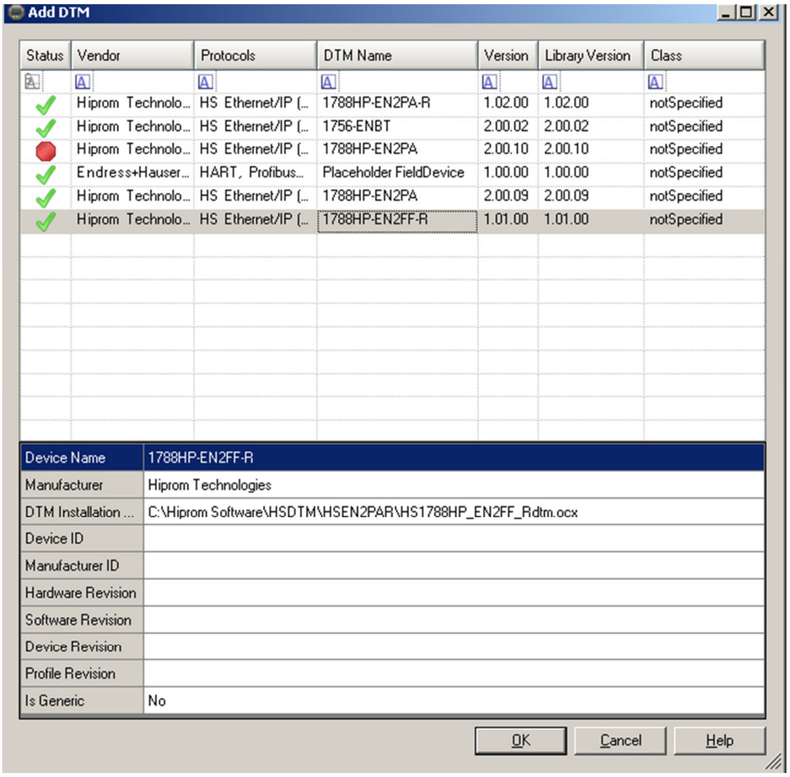
6. Select the DTM network and click on it to view the device DTM information on the bottom of the screen.



Status	Vendor	Protocols	DTM Name	Version	Library Version	Class
✓	Hiprom Technolo...	HS Ethernet/IP (...	1788HP-EN2PA-R	1.02.00	1.02.00	notSpecified
✓	Hiprom Technolo...	HS Ethernet/IP (...	1756-ENBT	2.00.02	2.00.02	notSpecified
●	Hiprom Technolo...	HS Ethernet/IP (...	1788HP-EN2PA	2.00.10	2.00.10	notSpecified
✓	Endress+Hauser...	HART, Profibus...	Placeholder FieldDevice	1.00.00	1.00.00	notSpecified
✓	Hiprom Technolo...	HS Ethernet/IP (...	1788HP-EN2PA	2.00.09	2.00.09	notSpecified
✓	Hiprom Technolo...	HS Ethernet/IP (...	1788HP-EN2FF-R	1.01.00	1.01.00	notSpecified

Device Name	Placeholder FieldDevice
Manufacturer	Endress+Hauser, Rockwell Automation
DTM Installation ...	file:///C:\Program Files\Rockwell Software\AssetCentre Client\RAEH.PlaceholderDtm.dll
Device ID	
Manufacturer ID	
Hardware Revision	
Software Revision	
Device Revision	
Profile Revision	
Is Generic	No

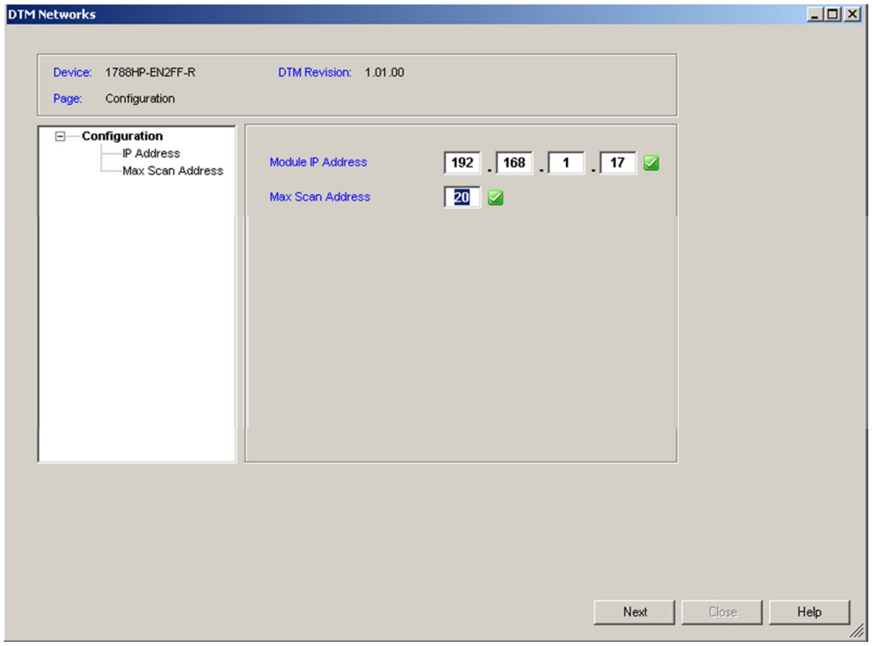
7. Select the 1788-EN2FFR and click **OK** to add the communications DTM.



Status	Vendor	Protocols	DTM Name	Version	Library Version	Class
✓	Hiprom Technolo...	HS Ethernet/IP (...	1788HP-EN2PA-R	1.02.00	1.02.00	notSpecified
✓	Hiprom Technolo...	HS Ethernet/IP (...	1756-ENBT	2.00.02	2.00.02	notSpecified
●	Hiprom Technolo...	HS Ethernet/IP (...	1788HP-EN2PA	2.00.10	2.00.10	notSpecified
✓	Endress+Hauser...	HART, Profibus...	Placeholder FieldDevice	1.00.00	1.00.00	notSpecified
✓	Hiprom Technolo...	HS Ethernet/IP (...	1788HP-EN2PA	2.00.09	2.00.09	notSpecified
✓	Hiprom Technolo...	HS Ethernet/IP (...	1788HP-EN2FF-R	1.01.00	1.01.00	notSpecified

Device Name	1788HP-EN2FF-R
Manufacturer	Hiprom Technologies
DTM Installation ...	C:\Hiprom Software\HSDTM\HSEN2PAR\HS1788HP_EN2FF_Rdtm.ocx
Device ID	
Manufacturer ID	
Hardware Revision	
Software Revision	
Device Revision	
Profile Revision	
Is Generic	No

8. Add the IP address and Max Scan Address (the highest IP address used on the network) and hit the **Enter** key after each field is filled.



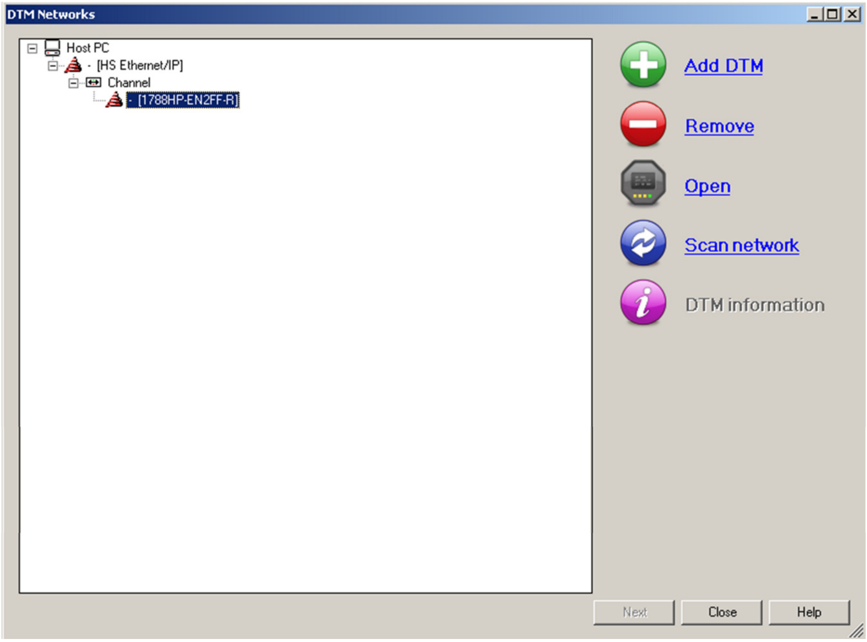
Device: 1788HP-EN2FF-R DTM Revision: 1.01.00

Page: Configuration

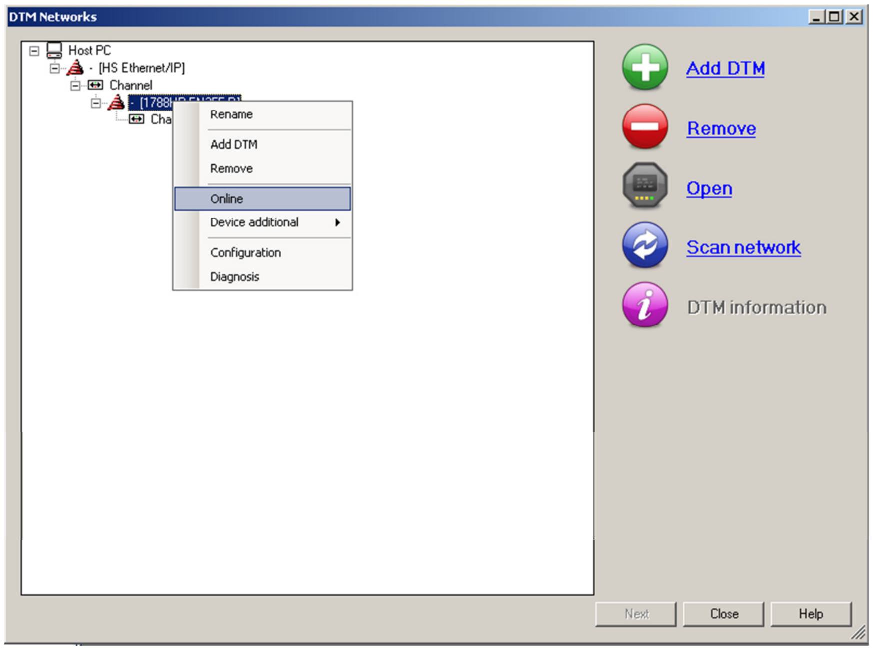
Module IP Address 192 . 168 . 1 . 17

Max Scan Address 20

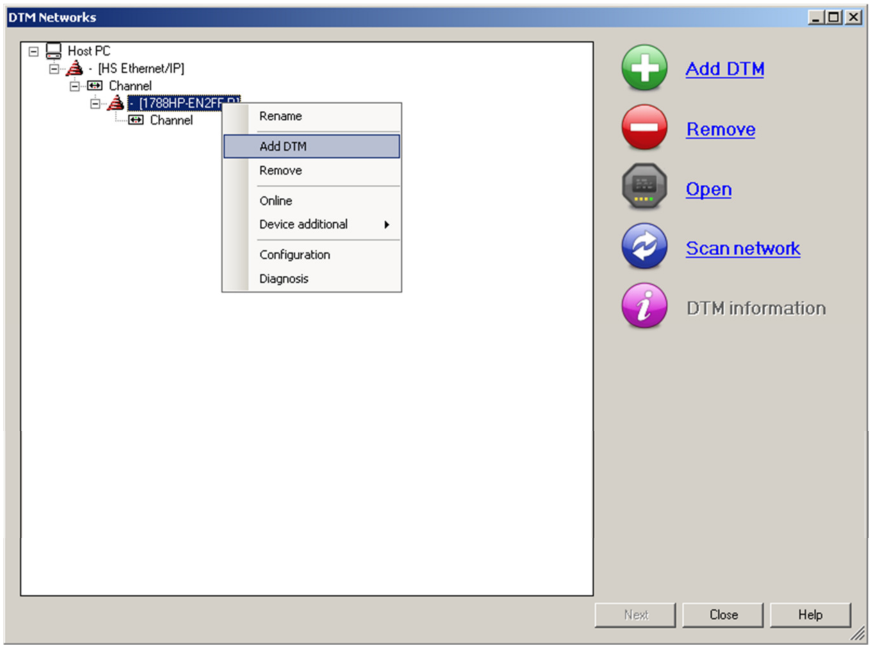
9. After you click **Next** on the above screen, the tree should look like this one.


DTM Networks
Host PC
- [HS Ethernet/IP]
Channel
- [1788HP-EN2FF-R]
Add DTM
Remove
Open
Scan network
DTM information
Next
Close
Help

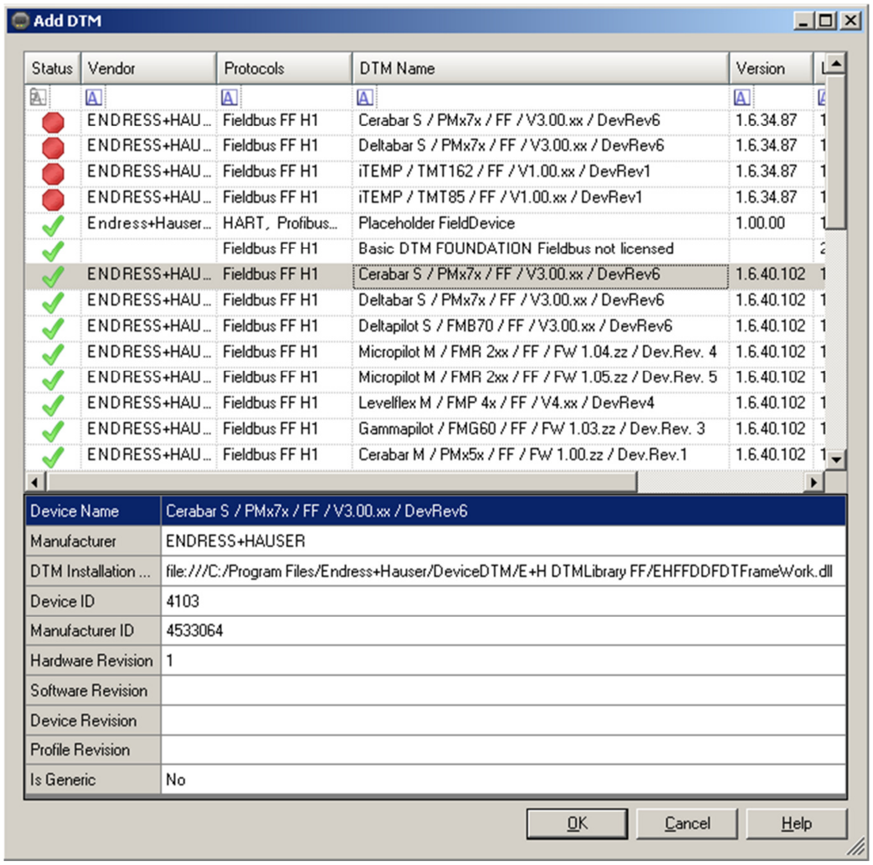
10. Right click on the device and select **Online** from the menu.


DTM Networks
Host PC
- [HS Ethernet/IP]
Channel
- [1788HP-EN2FF-R]
Cha
Rename
Add DTM
Remove
Online
Device additional
Configuration
Diagnosis
Add DTM
Remove
Open
Scan network
DTM information
Next
Close
Help

11. Right click on the **EN2FFR**, then **Add DTM**.


DTM Networks
Host PC
- [HS Ethernet/IP]
Channel
- [1788HP-EN2FF-R]
Channel
Rename
Add DTM
Remove
Online
Device additional
Configuration
Diagnosis
Add DTM
Remove
Open
Scan network
DTM information
Next
Close
Help

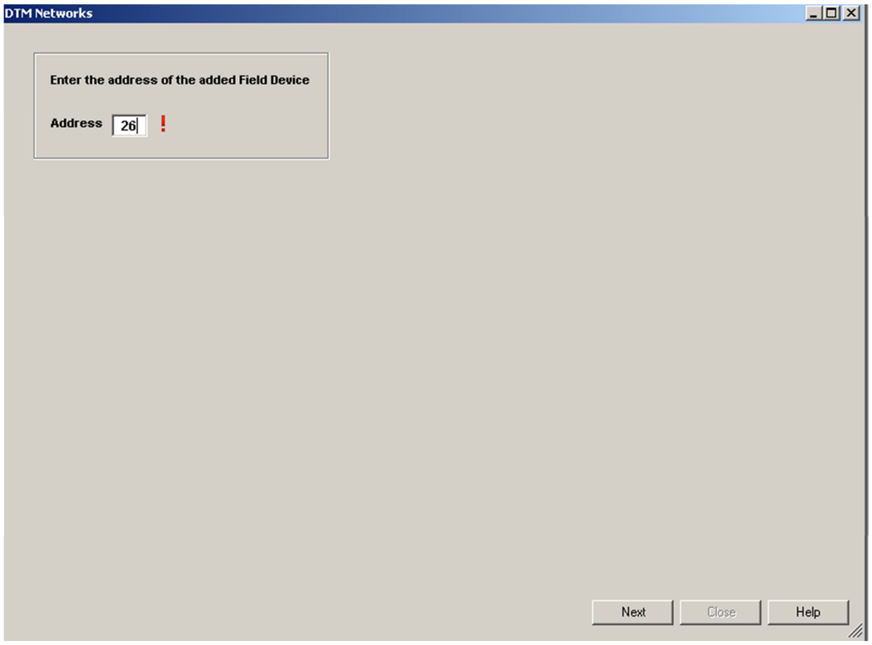
12. Select the correct DTM, and then click **OK**.


Add DTM
OK
Cancel
Help

Status	Vendor	Protocols	DTM Name	Version
●	ENDRESS+HAU...	Fieldbus FF H1	Cerabar S / PMx7x / FF / V3.00.xx / DevRev6	1.6.34.87
●	ENDRESS+HAU...	Fieldbus FF H1	Deltabar S / PMx7x / FF / V3.00.xx / DevRev6	1.6.34.87
●	ENDRESS+HAU...	Fieldbus FF H1	iTEMP / TMT162 / FF / V1.00.xx / DevRev1	1.6.34.87
●	ENDRESS+HAU...	Fieldbus FF H1	iTEMP / TMT85 / FF / V1.00.xx / DevRev1	1.6.34.87
✓	Endress+Hauser...	HART, Profibus...	Placeholder FieldDevice	1.00.00
✓		Fieldbus FF H1	Basic DTM FOUNDATION Fieldbus not licensed	
✓	ENDRESS+HAU...	Fieldbus FF H1	Cerabar S / PMx7x / FF / V3.00.xx / DevRev6	1.6.40.102
✓	ENDRESS+HAU...	Fieldbus FF H1	Deltabar S / PMx7x / FF / V3.00.xx / DevRev6	1.6.40.102
✓	ENDRESS+HAU...	Fieldbus FF H1	Deltapilot S / FMB70 / FF / V3.00.xx / DevRev6	1.6.40.102
✓	ENDRESS+HAU...	Fieldbus FF H1	Micropilot M / FMR 2xx / FF / FW 1.04.zz / Dev.Rev. 4	1.6.40.102
✓	ENDRESS+HAU...	Fieldbus FF H1	Micropilot M / FMR 2xx / FF / FW 1.05.zz / Dev.Rev. 5	1.6.40.102
✓	ENDRESS+HAU...	Fieldbus FF H1	Levelflex M / FMP 4x / FF / V4.xx / DevRev4	1.6.40.102
✓	ENDRESS+HAU...	Fieldbus FF H1	Gammapilot / FMG60 / FF / FW 1.03.zz / Dev.Rev. 3	1.6.40.102
✓	ENDRESS+HAU...	Fieldbus FF H1	Cerabar M / PMx5x / FF / FW 1.00.zz / Dev.Rev.1	1.6.40.102

Device Name	Cerabar S / PMx7x / FF / V3.00.xx / DevRev6
Manufacturer	ENDRESS+HAUSER
DTM Installation ...	file:///C:/Program Files/Endress+Hauser/DeviceDTM/E+H DTMLibrary FF/EHFFDDFDTFrameWork.dll
Device ID	4103
Manufacturer ID	4533064
Hardware Revision	1
Software Revision	
Device Revision	
Profile Revision	
Is Generic	No

13. Fill in the node address field, then hit the **Enter** key.



DTM Networks

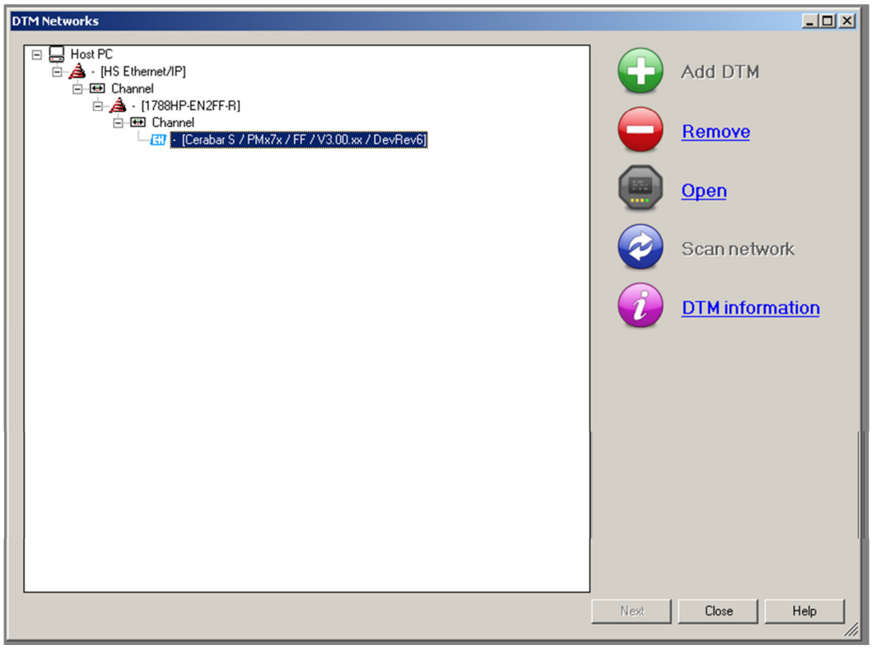
Enter the address of the added Field Device

Address 26 !

Next
Close
Help

IMPORTANT Right click the devices in the tree to verify online status.

14. The device tree should resemble the one below.

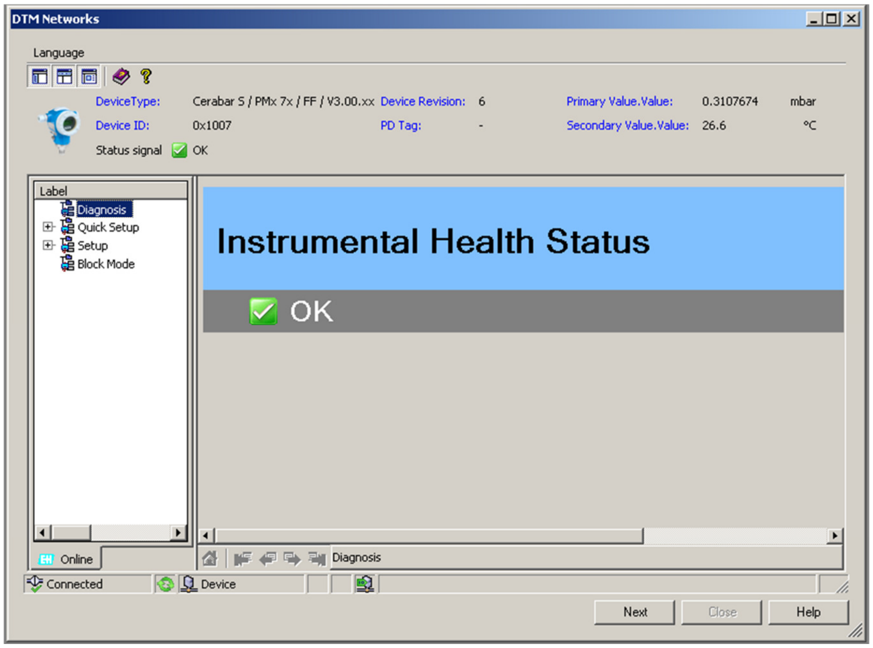


DTM Networks

```
Host PC
  - [HS Ethernet/IP]
    Channel
      - [1788HP-EN2FF-R]
        Channel
          - [Cerabar S / PMx7x / FF / V3.00.xx / DevRev6]
```

Add DTM
Remove
Open
Scan network
DTM information
Next
Close
Help

15. Select the Cerabar S and click **Open**. Verify the device is connected by looking at the bottom left corner of the screen. Then click **Next**.


DTM Networks

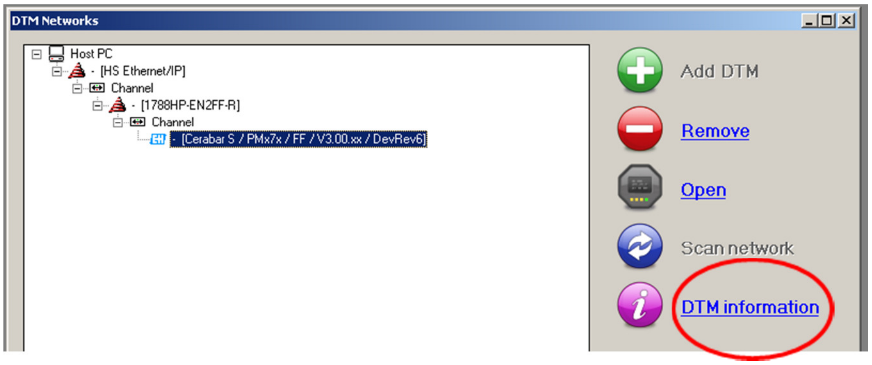
DeviceType: Cerabar S / PMx 7x / FF / V3.00.xx
Device Revision: 6
Primary Value.Value: 0.3107674 mbar
Device ID: 0x1007
PD Tag: -
Secondary Value.Value: 26.6 °C
Status signal ✓ OK

Instrumental Health Status
✓ OK

Language
Label
Diagnosis
Quick Setup
Setup
Block Mode
Online
Diagnosis
Connected
Device
Next
Close
Help

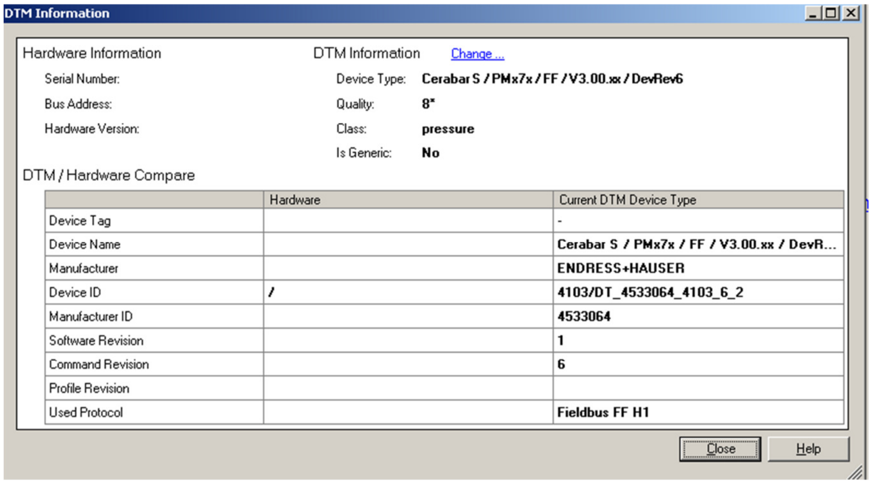
IMPORTANT Use the tree on the left of the DTM frame to navigate to different properties of the device, make changes, or view data.

16. To get information about the DTM, click **DTM Information**.


DTM Networks

Host PC
- [HS Ethernet/IP]
Channel
- [1788HP-EN2FF-R]
Channel
- [Cerabar S / PMx7x / FF / V3.00.xx / DevRev6]
Add DTM
Remove
Open
Scan network
DTM information

An information screen will display the DTM details.



DTM Information

Hardware Information
Serial Number:
Bus Address:
Hardware Version:

DTM Information Change ...
Device Type: Cerabar S / PMx7x / FF / V3.00.xx / DevRev6
Quality: 8*
Class: pressure
Is Generic: No

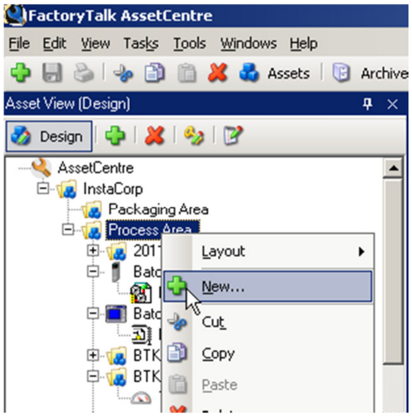
DTM / Hardware Compare

	Hardware	Current DTM Device Type
Device Tag		-
Device Name		Cerabar S / PMx7x / FF / V3.00.xx / DevR...
Manufacturer		ENDRESS+HAUSER
Device ID	/	4103/DT_4533064_4103_6_2
Manufacturer ID		4533064
Software Revision		1
Command Revision		6
Profile Revision		
Used Protocol		Fieldbus FF H1

17. Click **Close** to finish, then **Save** the project to ensure that the changes are not lost.

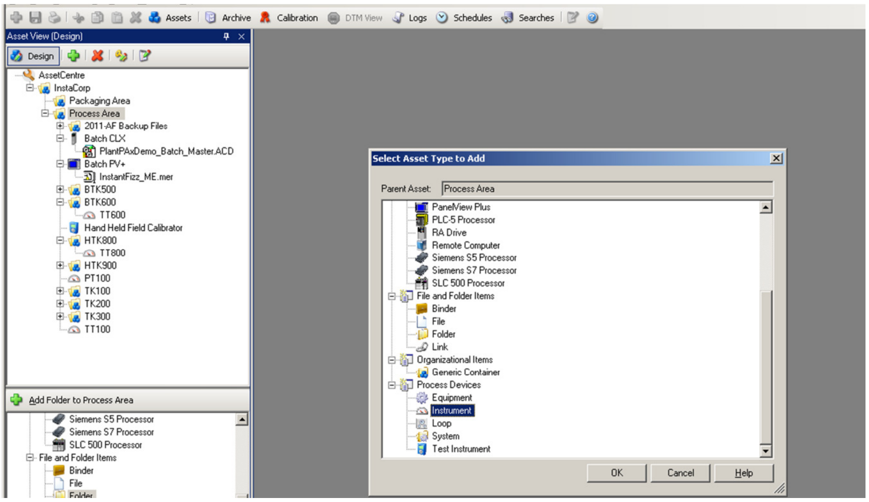
The remaining steps will verify that the DTM is installed and working properly in AssetCentre.

18. First click the **Design** button above the tree to enter Design mode. Then, in the AssetCentre tree, right click **Process Area** and select **New**.



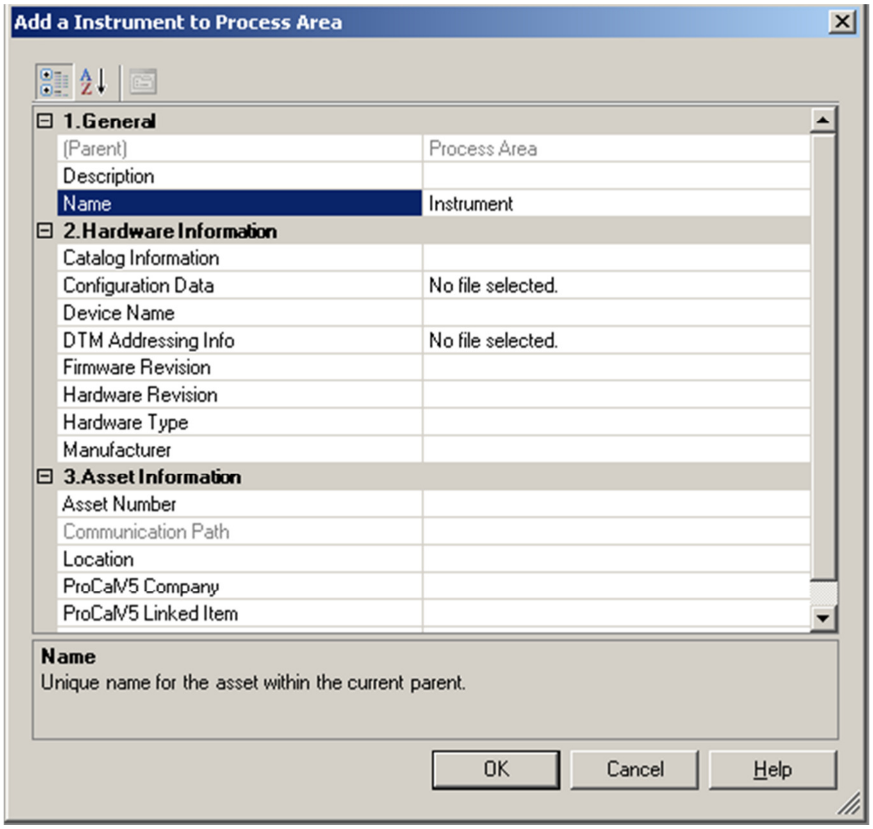
FactoryTalk AssetCentre
File Edit View Tasks Tools Windows Help
Assets
Archive
Asset View (Design)
Design
AssetCentre
InstaCorp
Packaging Area
Process Area
201
Batc
Batc
BTK
BTK
Layout
New...
Cut
Copy
Paste

19. From the Process Area Tree in the Asset Type to Add window, click **Instrument** then **OK**.


Assets
Archive
Calibration
DTM View
Logs
Schedules
Searches
Asset View (Design)
Design
AssetCentre
InstaCorp
Packaging Area
Process Area
2011-AF Backup Files
Batch CLX
PlantPAxDemo_Batch_Master.ACD
Batch PV+
InstantFizz_ME.mer
BTK500
BTK600
TT600
Hand Held Field Calibrator
HTK800
TT800
HTK900
PT100
TK100
TK200
TK300
TT100
Add Folder to Process Area
Siemens S5 Processor
Siemens S7 Processor
SLC 500 Processor
File and Folder Items
Binder
File
Folder
Select Asset Type to Add
PanelView Plus
PLC-5 Processor
RA Drive
Remote Computer
Siemens S5 Processor
Siemens S7 Processor
SLC 500 Processor
File and Folder Items
Binder
File
Folder
Link
Organizational Items
Generic Container
Process Devices
Equipment
Instrument
Loop
System
Test Instrument
OK
Cancel
Help

Parent Asset: Process Area

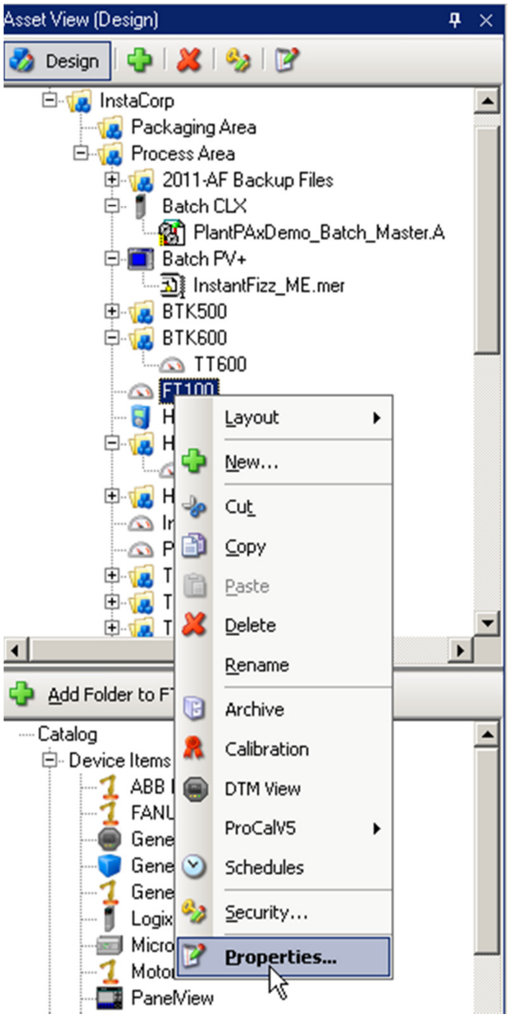
20. Enter a name (i.e. – Instrument) in the Name field. Click **OK**.


Add a Instrument to Process Area
OK
Cancel
Help

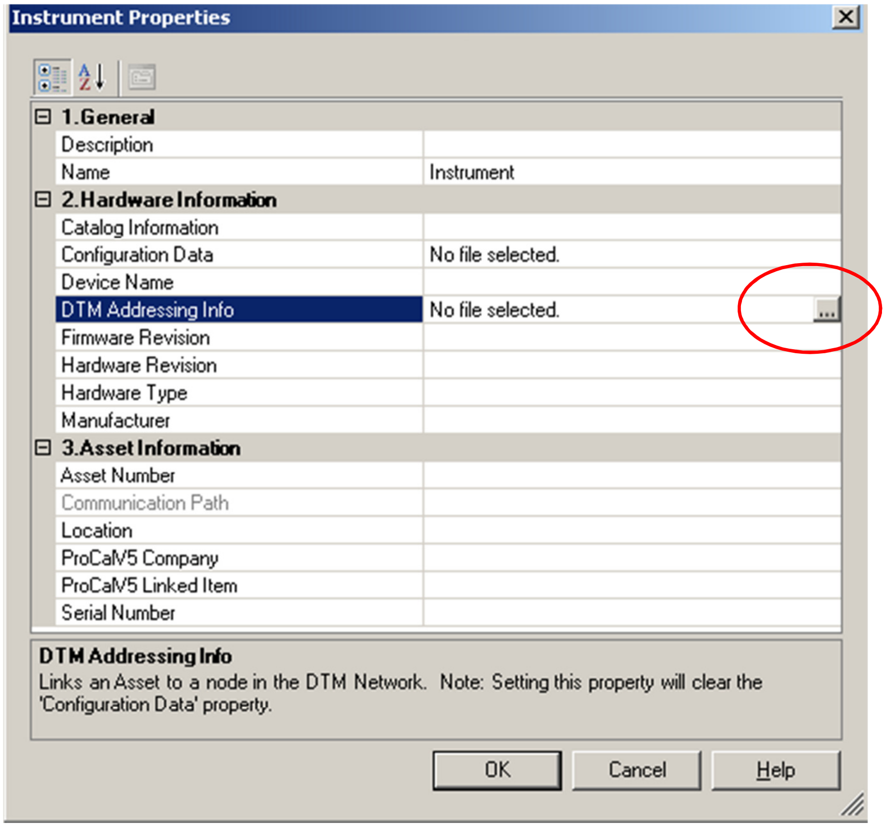
1.General	
(Parent)	Process Area
Description	
Name	Instrument
2.Hardware Information	
Catalog Information	
Configuration Data	No file selected.
Device Name	
DTM Addressing Info	No file selected.
Firmware Revision	
Hardware Revision	
Hardware Type	
Manufacturer	
3.Asset Information	
Asset Number	
Communication Path	
Location	
ProCalV5 Company	
ProCalV5 Linked Item	

Name
Unique name for the asset within the current parent.

21. Right click on the newly named device and select **Properties** from the menu.


Asset View (Design)
Design
InstaCorp
Packaging Area
Process Area
2011-AF Backup Files
Batch CLX
PlantPAxDemo_Batch_Master.A
Batch PV+
InstantFizz_ME.mer
BTK500
BTK600
TT600
FT100
Layout
New...
Cut
Copy
Paste
Delete
Rename
Archive
Calibration
DTM View
ProCalV5
Schedules
Security...
Properties...
Add Folder to F
Catalog
Device Items
ABB
FANU
Gene
Gene
Gene
Logix
Micro
Moto
PanelView

22. Select **DTM Addressing Info** and click the **Grey Box (…)** on the right side of the screen.



1.General

Description	
Name	Instrument

2.Hardware Information

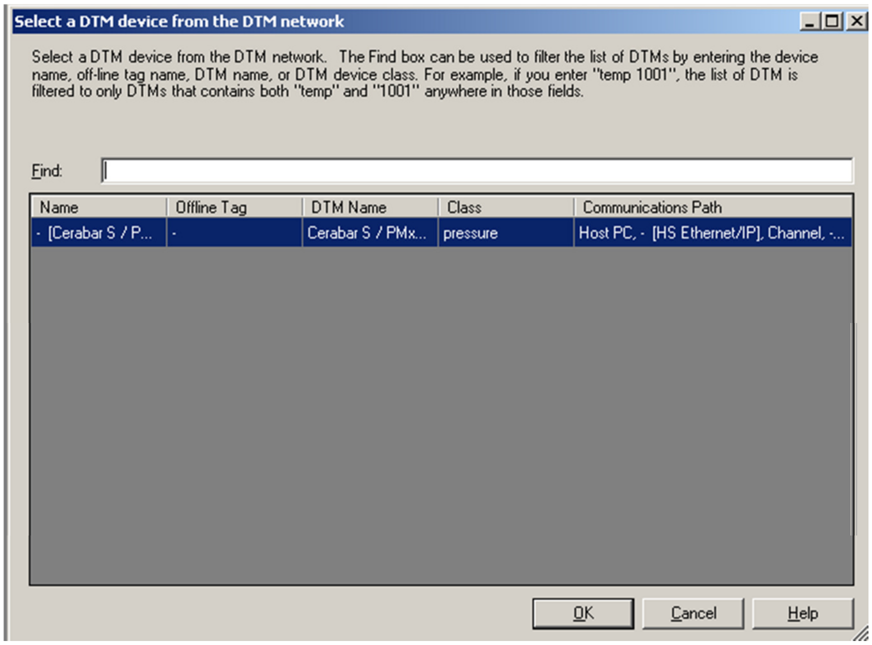
Catalog Information	
Configuration Data	No file selected.
Device Name	
DTM Addressing Info	No file selected.
Firmware Revision	
Hardware Revision	
Hardware Type	
Manufacturer	

3.Asset Information

Asset Number	
Communication Path	
Location	
ProCalV5 Company	
ProCalV5 Linked Item	
Serial Number	

DTM Addressing Info
Links an Asset to a node in the DTM Network. Note: Setting this property will clear the 'Configuration Data' property.

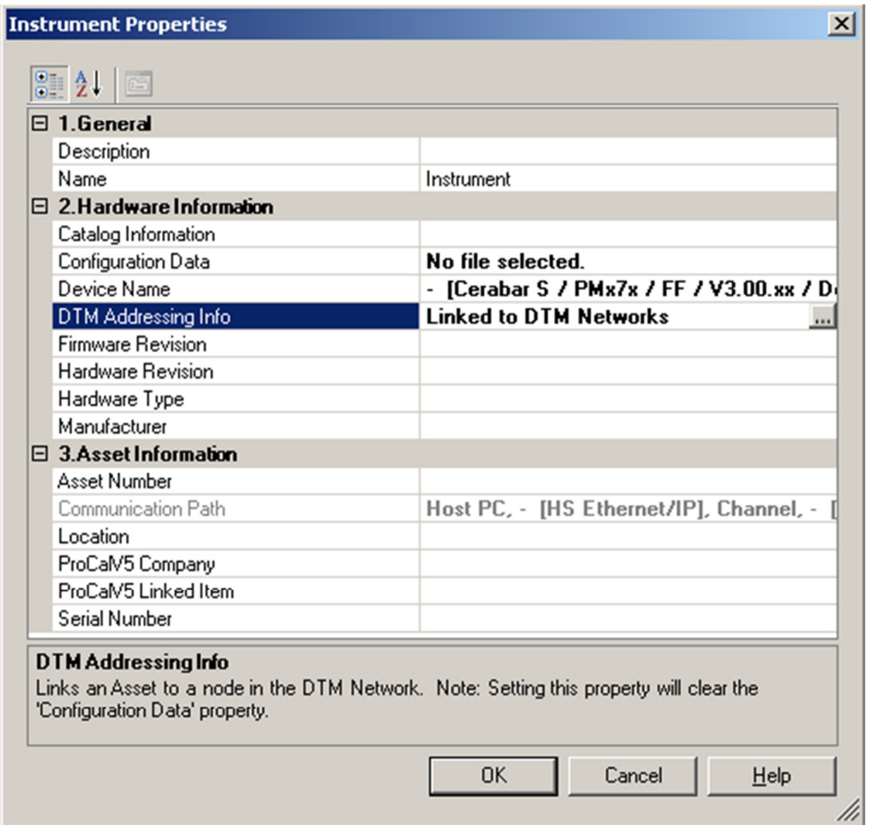
23. Click on **Cerabar S** to highlight the row and click **OK**.



Select a DTM device from the DTM network. The Find box can be used to filter the list of DTMs by entering the device name, off-line tag name, DTM name, or DTM device class. For example, if you enter "temp 1001", the list of DTM is filtered to only DTMs that contains both "temp" and "1001" anywhere in those fields.

Name	Offline Tag	DTM Name	Class	Communications Path
- [Cerabar S / P...	-	Cerabar S / PMx...	pressure	Host PC, - [HS Ethernet/IP], Channel, -...

24. Click **OK** on this screen to accept the changes.



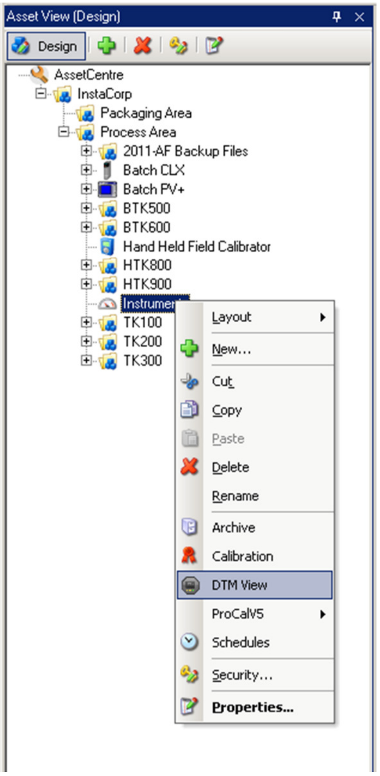
Instrument Properties

1.General	
Description	
Name	Instrument
2.Hardware Information	
Catalog Information	
Configuration Data	No file selected.
Device Name	- [Cerabar S / PMx7x / FF / V3.00.xx / D
DTM Addressing Info	Linked to DTM Networks
Firmware Revision	
Hardware Revision	
Hardware Type	
Manufacturer	
3.Asset Information	
Asset Number	
Communication Path	Host PC, - [HS Ethernet/IP], Channel, - [
Location	
ProCalV5 Company	
ProCalV5 Linked Item	
Serial Number	

DTM Addressing Info
Links an Asset to a node in the DTM Network. Note: Setting this property will clear the 'Configuration Data' property.

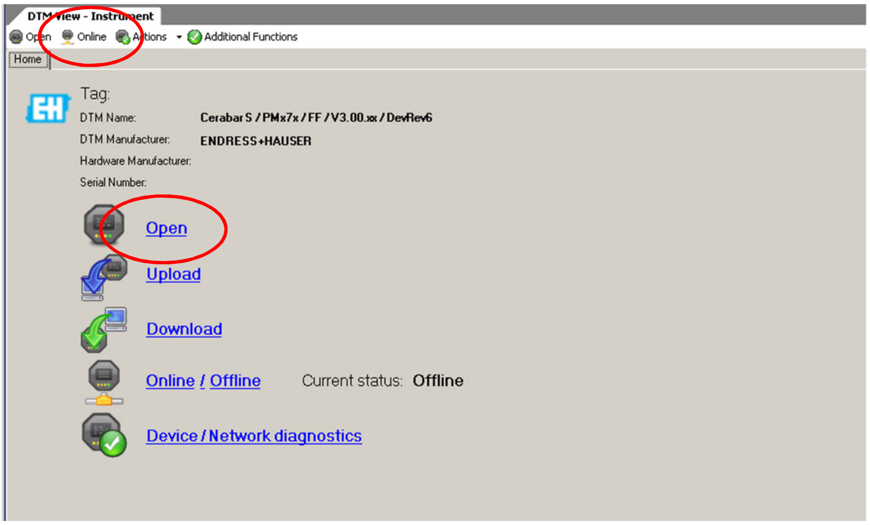
OK
Cancel
Help

25. Right click **Instrument** and select **DTM View**.



Asset View (Design)
Design
AssetCentre
InstaCorp
Packaging Area
Process Area
2011-AF Backup Files
Batch CLX
Batch PV+
BTK500
BTK600
Hand Held Field Calibrator
HTK800
HTK900
Instrument
TK100
TK200
TK300
Layout
New...
Cut
Copy
Paste
Delete
Rename
Archive
Calibration
DTM View
ProCalV5
Schedules
Security...
Properties...

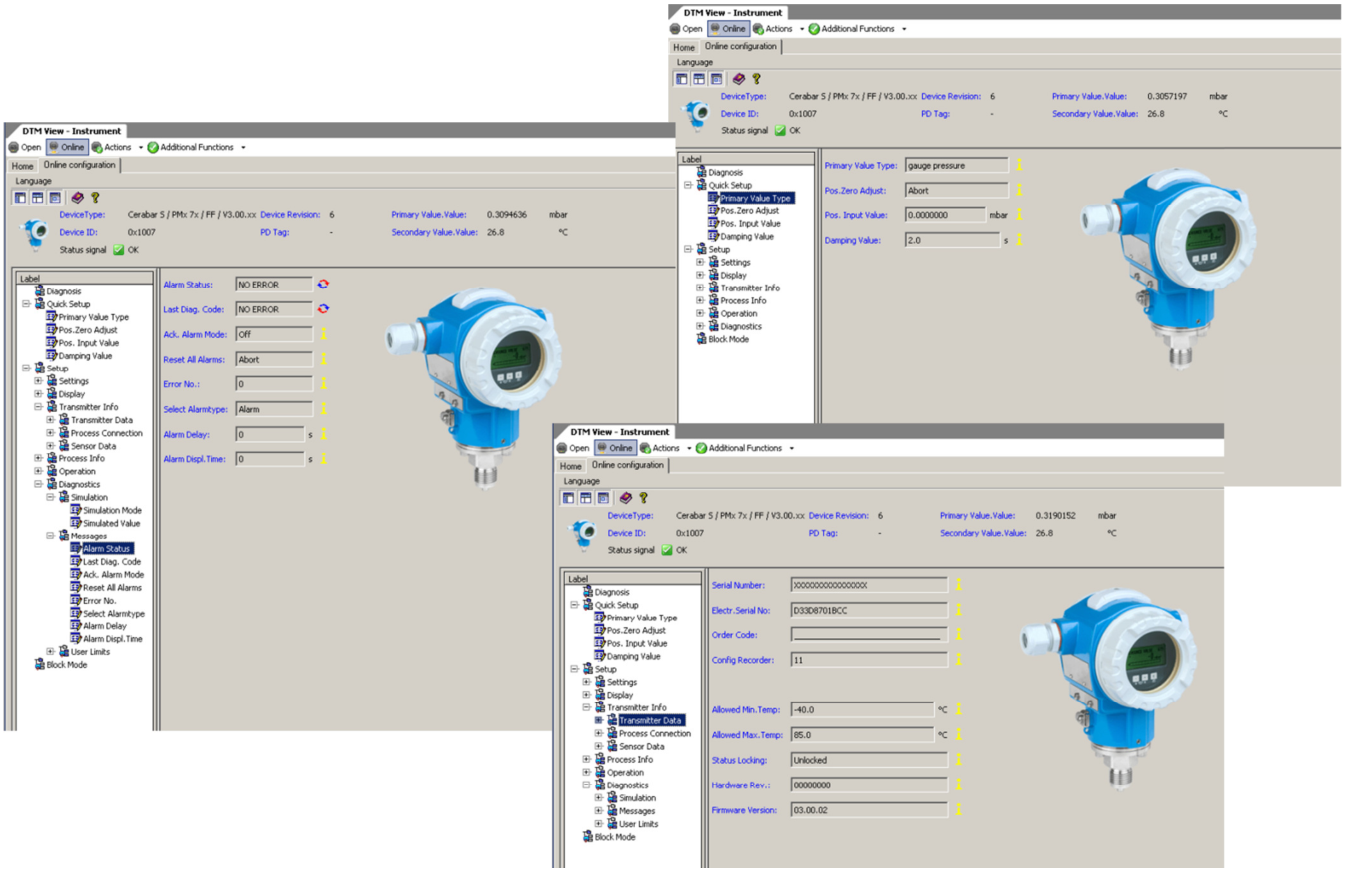
26. Click on **Online** at the top of the screen, then **Open**.


DTM View - Instrument
Open
Online
Actions
Additional Functions
Home
Open
Upload
Download
Online / Offline
Device / Network diagnostics

Tag:
DTM Name: Cerabar S / PMx7x / FF / V3.00.xx / DevRev6
DTM Manufacturer: ENDRESS+HAUSER
Hardware Manufacturer:
Serial Number:

Current status: Offline

27. Select from the device attributes in the tree by clicking on a heading. Make any changes to the settings that are necessary. Screen examples are shown below.


DTM View - Instrument
Open
Online
Actions
Additional Functions
Home
Online configuration
Language
Label
Diagnosis
Quick Setup
Primary Value Type
Pos.Zero Adjust
Pos. Input Value
Damping Value
Setup
Settings
Display
Transmitter Info
Transmitter Data
Process Connection
Sensor Data
Process Info
Operation
Diagnostics
Simulation
Simulation Mode
Simulated Value
Messages
Alarm Status
Last Diag. Code
Ack. Alarm Mode
Reset All Alarms
Error No.
Select Alarmtype
Alarm Delay
Alarm Displ.Time
User Limits
Block Mode

DeviceType: Cerabar S / PMx 7x / FF / V3.00.xx Device Revision: 6 Primary Value.Value: 0.3094636 mbar
Device ID: 0x1007 PD Tag: - Secondary Value.Value: 26.8 °C
Status signal ✓ OK

Alarm Status: NO ERROR
Last Diag. Code: NO ERROR
Ack. Alarm Mode: Off
Reset All Alarms: Abort
Error No.: 0
Select Alarmtype: Alarm
Alarm Delay: 0 s
Alarm Displ.Time: 0 s

DeviceType: Cerabar S / PMx 7x / FF / V3.00.xx Device Revision: 6 Primary Value.Value: 0.3057197 mbar
Device ID: 0x1007 PD Tag: - Secondary Value.Value: 26.8 °C
Status signal ✓ OK

Primary Value Type: gauge pressure
Pos.Zero Adjust: Abort
Pos. Input Value: 0.0000000 mbar
Damping Value: 2.0 s

DeviceType: Cerabar S / PMx 7x / FF / V3.00.xx Device Revision: 6 Primary Value.Value: 0.3190152 mbar
Device ID: 0x1007 PD Tag: - Secondary Value.Value: 26.8 °C
Status signal ✓ OK

Serial Number: XXXXXXXXXXXXXXXX
Electr.Serial No: D33D8701BCC
Order Code:
Config Recorder: 11
Allowed Min.Temp: -40.0 °C
Allowed Max.Temp: 85.0 °C
Status Locking: Unlocked
Hardware Rev.: 00000000
Firmware Version: 03.00.02

28. **Close** the DTM window, **Save** the project, and **Close** AssetCentre.

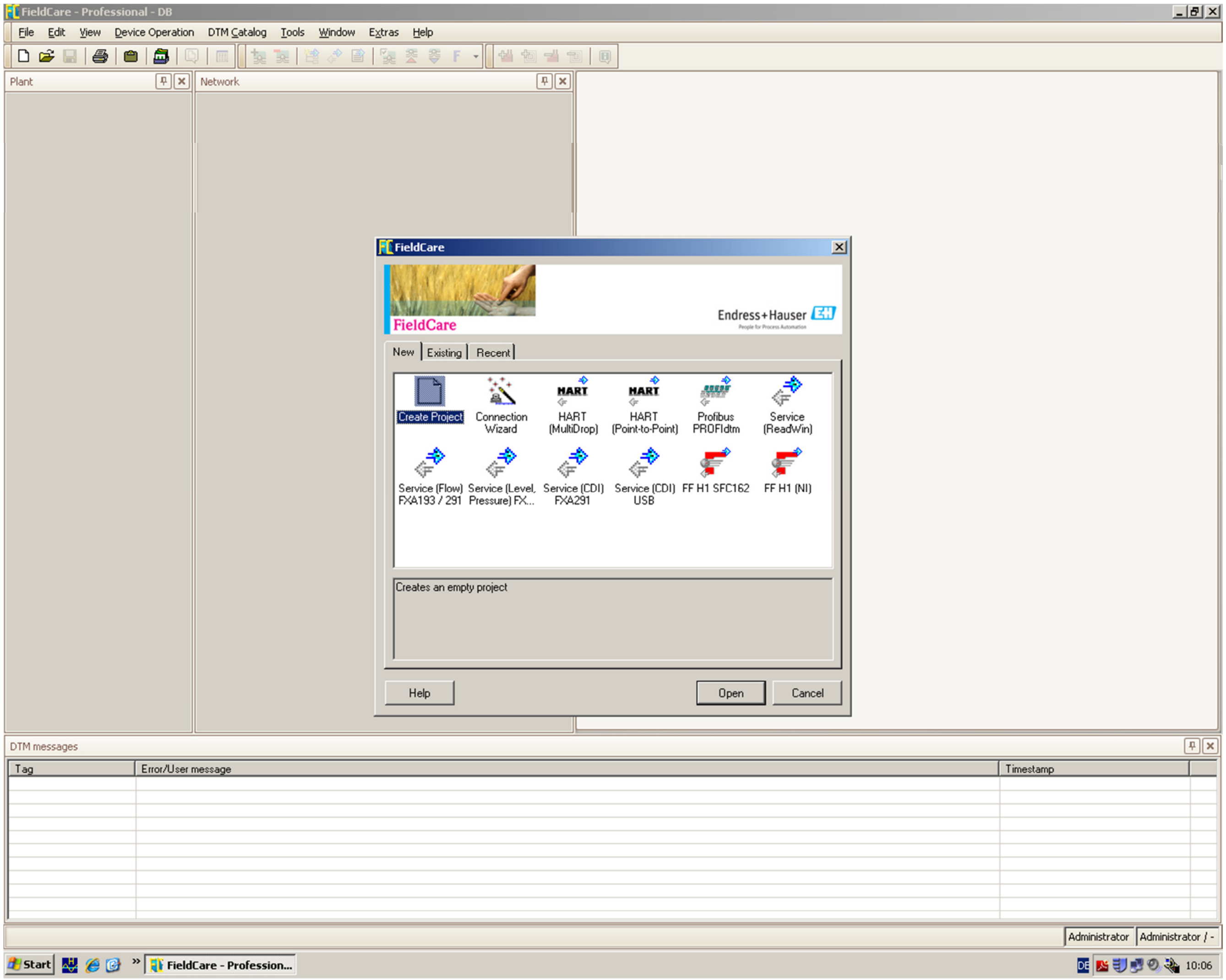
Connect to, Monitor and Configure the Instrument via FieldCare

FieldCare is the FDT-based plant asset management software tool that lets you configure the intelligent field instruments.

Note: Before starting make sure the DTM's have been imported and installed for the Hiprom Communication linking device and the E+H Instrument. To access the DTMs and other software download them from the Hiprom and or E+H websites.

1. Install the appropriate DTMs.

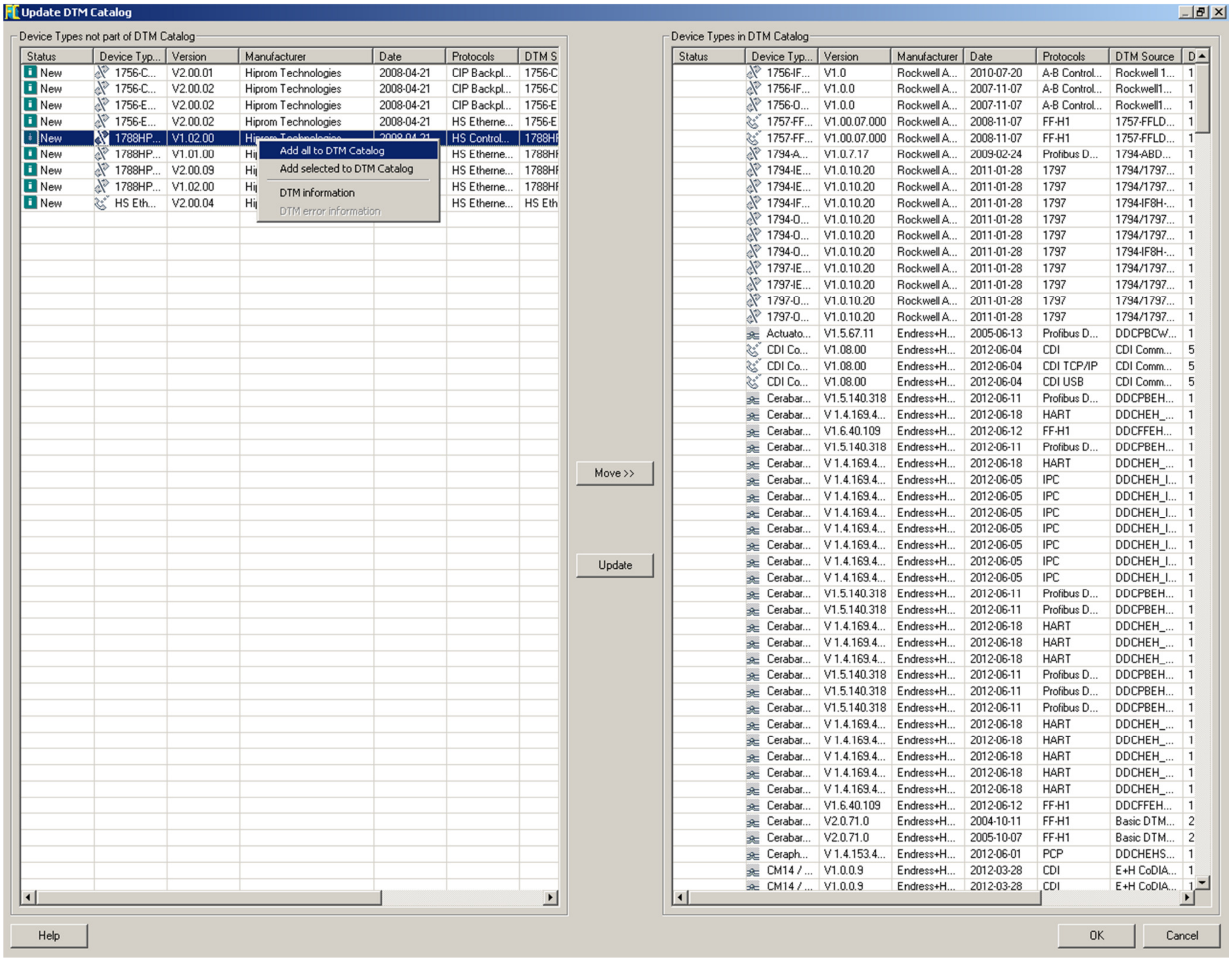
2. Start FieldCare and open a new project.


FieldCare - Professional - DB
File Edit View Device Operation DTM Catalog Tools Window Extras Help
Plant
Network
FieldCare
FieldCare
Endress+Hauser
New Existing Recent
Create Project
Connection Wizard
HART (MultiDrop)
HART (Point-to-Point)
Profibus PROFIdtm
Service (ReadWin)
Service (Flow) FXA193 / 291
Service (Level, Pressure) FX...
Service (CDI) FXA291
Service (CDI) USB
FF H1 SFC162
FF H1 (NI)
Help
Open
Cancel
DTM messages
Tag
Error/User message
Timestamp
Administrator
Administrator / -
Start
FieldCare - Profession...
10:06

Creates an empty project

3. Choose the DTM Catalog menu and click update.

4. If there are DTMs listed in the dialog box´s left pane, select desired DTMs and click Move or choose “Add all to DTM catalog”.



Device Types not part of DTM Catalog

Status	Device Typ...	Version	Manufacturer	Date	Protocols	DTM S
New	1756-C...	V2.00.01	Hiprom Technologies	2008-04-21	CIP Backpl...	1756-C
New	1756-C...	V2.00.02	Hiprom Technologies	2008-04-21	CIP Backpl...	1756-C
New	1756-E...	V2.00.02	Hiprom Technologies	2008-04-21	CIP Backpl...	1756-E
New	1756-E...	V2.00.02	Hiprom Technologies	2008-04-21	HS Etherne...	1756-E
New	1788HP...	V1.02.00	Hiprom Technologies	2008-04-21	HS Control...	1788HI
New	1788HP...	V1.01.00	Hi		HS Etherne...	1788HI
New	1788HP...	V2.00.09	Hi		HS Etherne...	1788HI
New	1788HP...	V1.02.00	Hi		HS Etherne...	1788HI
New	HS Eth...	V2.00.04	Hi		HS Etherne...	HS Eth

Device Types in DTM Catalog

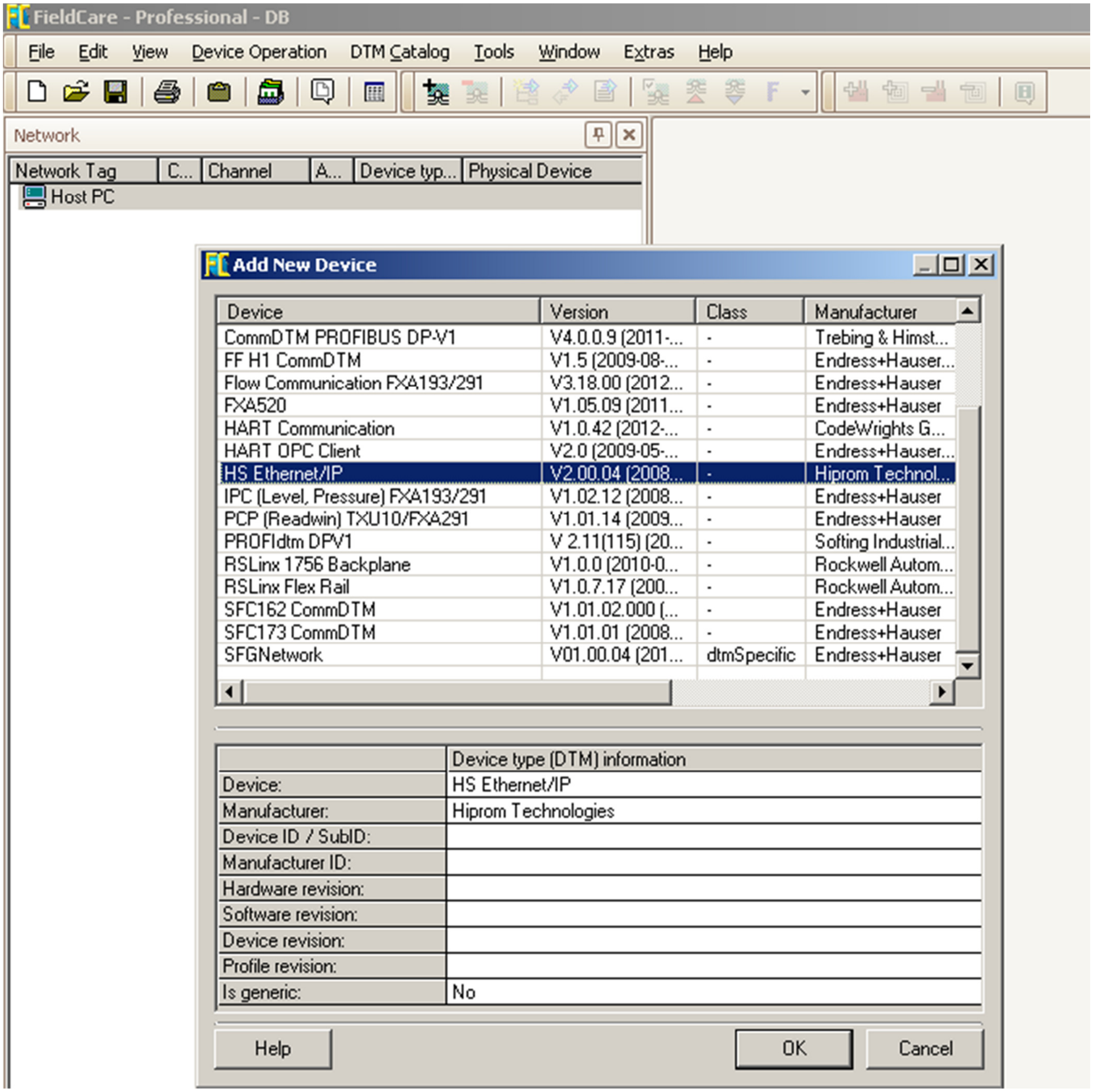
Status	Device Typ...	Version	Manufacturer	Date	Protocols	DTM Source	D
	1756-IF...	V1.0	Rockwell A...	2010-07-20	A-B Control...	Rockwell 1...	1
	1756-IF...	V1.0.0	Rockwell A...	2007-11-07	A-B Control...	Rockwell1...	1
	1756-O...	V1.0.0	Rockwell A...	2007-11-07	A-B Control...	Rockwell1...	1
	1757-FF...	V1.00.07.000	Rockwell A...	2008-11-07	FF-H1	1757-FFLD...	1
	1757-FF...	V1.00.07.000	Rockwell A...	2008-11-07	FF-H1	1757-FFLD...	1
	1794-A...	V1.0.7.17	Rockwell A...	2009-02-24	Profibus D...	1794-ABD...	1
	1794-IE...	V1.0.10.20	Rockwell A...	2011-01-28	1797	1794/1797...	1
	1794-IE...	V1.0.10.20	Rockwell A...	2011-01-28	1797	1794/1797...	1
	1794-IF...	V1.0.10.20	Rockwell A...	2011-01-28	1797	1794-IF8H-...	1
	1794-O...	V1.0.10.20	Rockwell A...	2011-01-28	1797	1794/1797...	1
	1794-O...	V1.0.10.20	Rockwell A...	2011-01-28	1797	1794/1797...	1
	1794-O...	V1.0.10.20	Rockwell A...	2011-01-28	1797	1794-IF8H-...	1
	1797-IE...	V1.0.10.20	Rockwell A...	2011-01-28	1797	1794/1797...	1
	1797-IE...	V1.0.10.20	Rockwell A...	2011-01-28	1797	1794/1797...	1
	1797-O...	V1.0.10.20	Rockwell A...	2011-01-28	1797	1794/1797...	1
	1797-O...	V1.0.10.20	Rockwell A...	2011-01-28	1797	1794/1797...	1
	Actuato...	V1.5.67.11	Endress+H...	2005-06-13	Profibus D...	DDCPBCW...	1
	CDI Co...	V1.08.00	Endress+H...	2012-06-04	CDI	CDI Comm...	5
	CDI Co...	V1.08.00	Endress+H...	2012-06-04	CDI TCP/IP	CDI Comm...	5
	CDI Co...	V1.08.00	Endress+H...	2012-06-04	CDI USB	CDI Comm...	5
	Cerabar...	V1.5.140.318	Endress+H...	2012-06-11	Profibus D...	DDCPBEH...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-18	HART	DDCHEH_...	1
	Cerabar...	V1.6.40.109	Endress+H...	2012-06-12	FF-H1	DDCFFEH...	1
	Cerabar...	V1.5.140.318	Endress+H...	2012-06-11	Profibus D...	DDCPBEH...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-18	HART	DDCHEH_...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-05	IPC	DDCHEH_I...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-05	IPC	DDCHEH_I...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-05	IPC	DDCHEH_I...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-05	IPC	DDCHEH_I...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-05	IPC	DDCHEH_I...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-05	IPC	DDCHEH_I...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-05	IPC	DDCHEH_I...	1
	Cerabar...	V1.5.140.318	Endress+H...	2012-06-11	Profibus D...	DDCPBEH...	1
	Cerabar...	V1.5.140.318	Endress+H...	2012-06-11	Profibus D...	DDCPBEH...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-18	HART	DDCHEH_...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-18	HART	DDCHEH_...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-18	HART	DDCHEH_...	1
	Cerabar...	V1.5.140.318	Endress+H...	2012-06-11	Profibus D...	DDCPBEH...	1
	Cerabar...	V1.5.140.318	Endress+H...	2012-06-11	Profibus D...	DDCPBEH...	1
	Cerabar...	V1.5.140.318	Endress+H...	2012-06-11	Profibus D...	DDCPBEH...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-18	HART	DDCHEH_...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-18	HART	DDCHEH_...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-18	HART	DDCHEH_...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-18	HART	DDCHEH_...	1
	Cerabar...	V 1.4.169.4...	Endress+H...	2012-06-18	HART	DDCHEH_...	1
	Cerabar...	V1.6.40.109	Endress+H...	2012-06-12	FF-H1	DDCFFEH...	1
	Cerabar...	V2.0.71.0	Endress+H...	2004-10-11	FF-H1	Basic DTM...	2
	Cerabar...	V2.0.71.0	Endress+H...	2005-10-07	FF-H1	Basic DTM...	2
	Ceraph...	V 1.4.153.4...	Endress+H...	2012-06-01	PCP	DDCHEHS...	1
	CM14 / ...	V1.0.0.9	Endress+H...	2012-03-28	CDI	E+H CoDIA...	1
	CM14 / ...	V1.0.0.9	Endress+H...	2012-03-28	CDI	E+H CoDIA...	1

If you do not find the desired DTMs, or if the left pane of the dialog box is empty, click Update. FieldCare searches for DTMs installed on your computer. After search, found DTMs are added to the dialog box´s left pane.

If necessary, to remove DTMs, select the desired DTMs in right pane and click Move.

5. Click OK to save your changes.

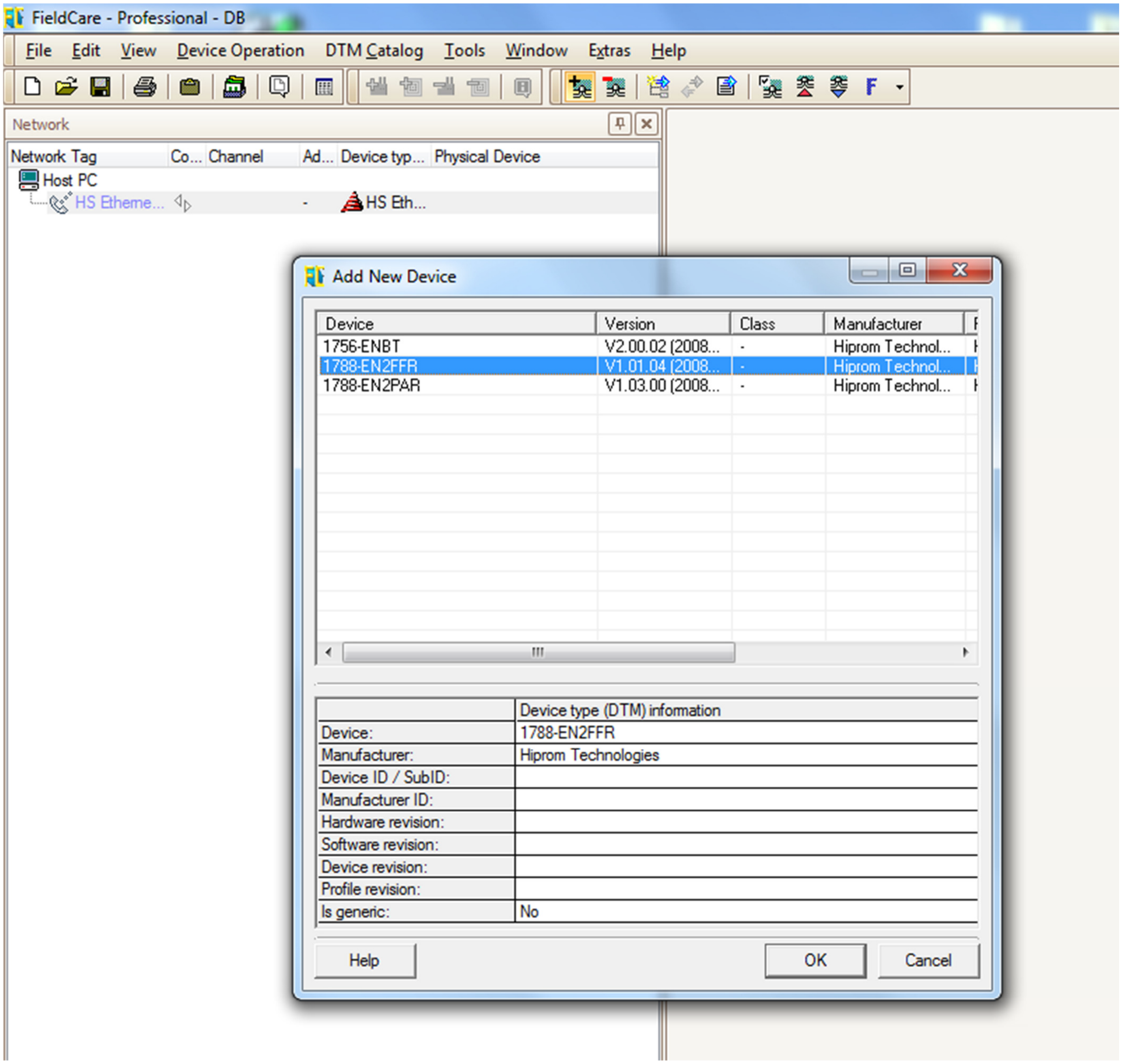
6. Click the Add Device icon, select HS EtherNet/IP DTM and click OK.


FieldCare - Professional - DB
File Edit View Device Operation DTM Catalog Tools Window Extras Help
Network
Network Tag
C...
Channel
A...
Device typ...
Physical Device
Host PC
Add New Device
Help
OK
Cancel

Device	Version	Class	Manufacturer
CommDTM PROFIBUS DP-V1	V4.0.0.9 (2011-...	-	Trebing & Himst...
FF H1 CommDTM	V1.5 (2009-08-...	-	Endress+Hauser...
Flow Communication FXA193/291	V3.18.00 (2012...	-	Endress+Hauser
FXA520	V1.05.09 (2011...	-	Endress+Hauser
HART Communication	V1.0.42 (2012-...	-	CodeWrights G...
HART OPC Client	V2.0 (2009-05-...	-	Endress+Hauser...
HS Ethernet/IP	V2.00.04 (2008...	-	Hiprom Technol...
IPC (Level, Pressure) FXA193/291	V1.02.12 (2008...	-	Endress+Hauser
PCP (Readwin) TXU10/FXA291	V1.01.14 (2009...	-	Endress+Hauser
PROFIdtm DPV1	V 2.11(115) (20...	-	Softing Industrial...
RSLinx 1756 Backplane	V1.0.0 (2010-0...	-	Rockwell Autom...
RSLinx Flex Rail	V1.0.7.17 (200...	-	Rockwell Autom...
SFC162 CommDTM	V1.01.02.000 (...	-	Endress+Hauser
SFC173 CommDTM	V1.01.01 (2008...	-	Endress+Hauser
SFGNetwork	V01.00.04 (201...	dtmSpecific	Endress+Hauser

	Device type (DTM) information
Device:	HS Ethernet/IP
Manufacturer:	Hiprom Technologies
Device ID / SubID:	
Manufacturer ID:	
Hardware revision:	
Software revision:	
Device revision:	
Profile revision:	
Is generic:	No

7. Click on HS EtherNet/IP- DTM. Click the Add Device icon, select 1788-EN2FF-R and click OK.

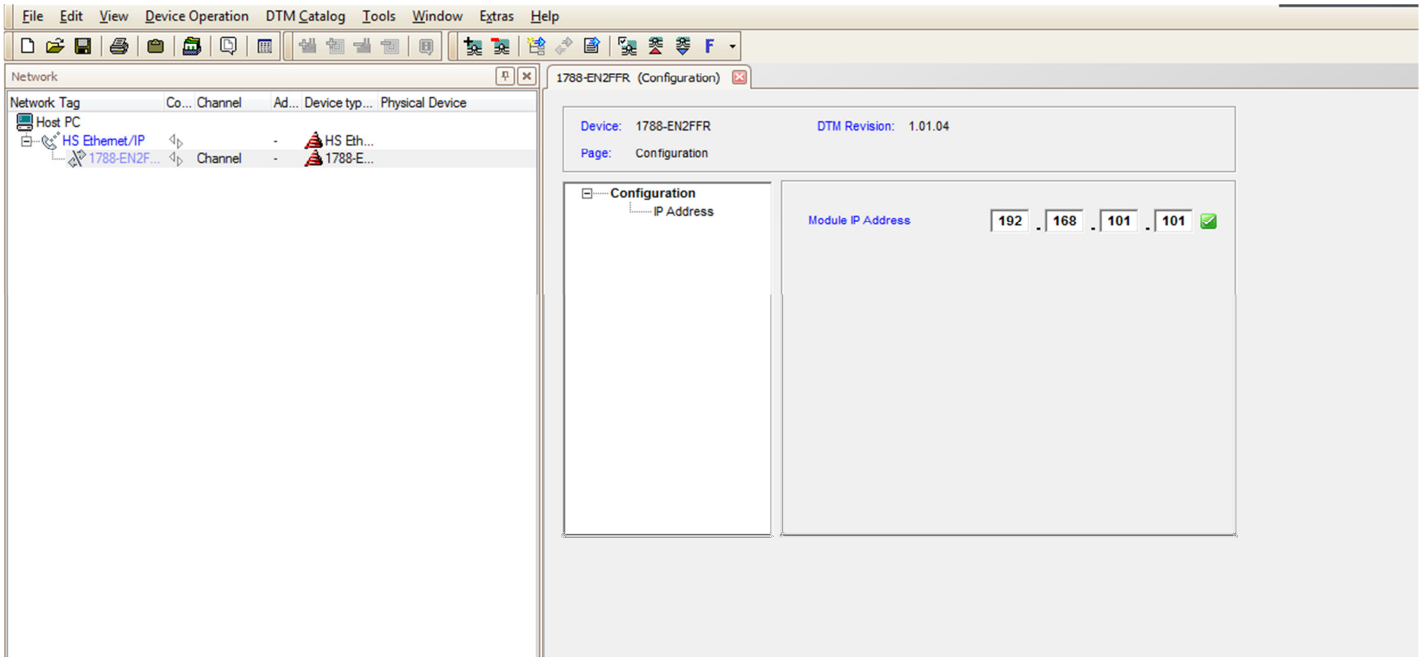

FieldCare - Professional - DB
File Edit View Device Operation DTM Catalog Tools Window Extras Help
Network
Network Tag Co... Channel Ad... Device typ... Physical Device
Host PC
HS Etherne... - HS Eth...
Add New Device
Help
OK
Cancel

Device	Version	Class	Manufacturer
1756-ENBT	V2.00.02 (2008...	-	Hiprom Technol...
1788-EN2FFR	V1.01.04 (2008...	-	Hiprom Technol...
1788-EN2PAR	V1.03.00 (2008...	-	Hiprom Technol...

	Device type (DTM) information
Device:	1788-EN2FFR
Manufacturer:	Hiprom Technologies
Device ID / SubID:	
Manufacturer ID:	
Hardware revision:	
Software revision:	
Device revision:	
Profile revision:	
Is generic:	No

8. To configure the 1788-EN2FF-R, double click on 1788-EN2FF-R in the left pane.

9. Enter the 1788-EN2FF-R IP address and the Max Scan Address.


File Edit View Device Operation DTM Catalog Tools Window Extras Help
Network
Network Tag
Co...
Channel
Ad...
Device typ...
Physical Device
Host PC
HS Ethernet/IP
HS Eth...
1788-EN2F...
Channel
1788-E...
1788-EN2FFR (Configuration)
Configuration
IP Address

Device: 1788-EN2FFR

DTM Revision: 1.01.04

Page: Configuration

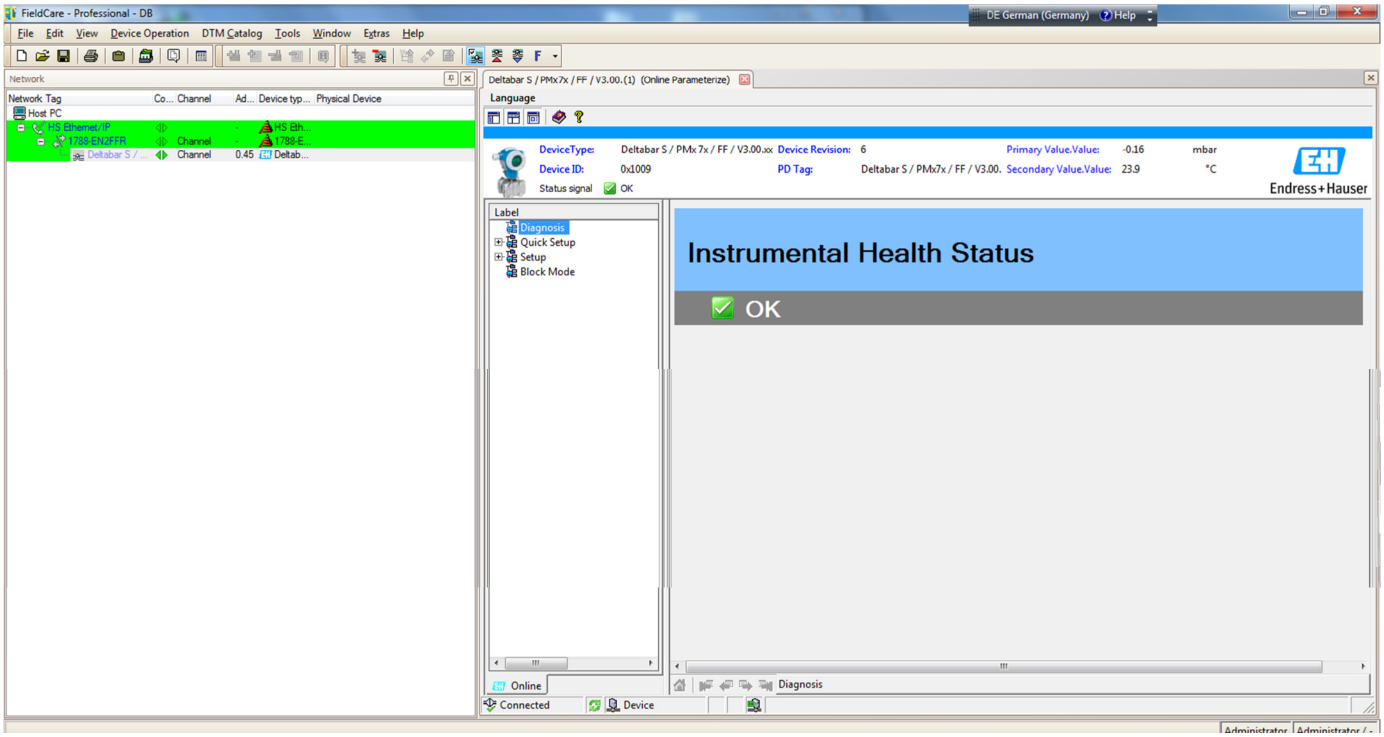
Module IP Address 192 . 168 . 101 . 101

10. Click the Create Network icon.

11. When prompted click OK. The Com DTM now scans the entire FOUNDATION fieldbus network behind the 1788-EN2FF-R and searches for the right DTM. If the right DTM is installed, the instrument comes up in the Explorer view on the left pane.
If only one DTM is added to the network, the Software automatically goes online. Otherwise a warning occurs that must be confirmed. To switch this behavior off, in the Explorer- context- menu Extras/ Options, select After Scanning within Page Scanning.

12. In an open FieldCare project, right-click on the instrument in the left pane and select Connect.

13. Double-click on the instrument in the left pane. The Online parameterization window appears with the Instrument Health Status.


FieldCare - Professional - DB
File Edit View Device Operation DTM Catalog Tools Window Extras Help
Network
Network Tag Co... Channel Ad... Device typ... Physical Device
Host PC
HS Ethernet/IP
1788-EN2FFR
Deltabar S / ...
Deltabar S / PMx7x / FF / V3.00.(1) (Online Parameterize)
Language
Label
Diagnosis
Quick Setup
Setup
Block Mode
Endress+Hauser
Online
Connected
Device
Diagnosis

DeviceType: Deltabar S / PMx 7x / FF / V3.00.xx
Device Revision: 6
Primary Value.Value: -0.16 mbar
Device ID: 0x1009
PD Tag: Deltabar S / PMx7x / FF / V3.00.
Secondary Value.Value: 23.9 °C
Status signal ✓ OK

Instrumental Health Status

✓ OK

14. You can right-click now on the instrument in the left pane to access other views and data, e.g. observe, reset or offline parameterization.

Visualization – Using AOIs and Faceplates

To monitor the instruments using the predesigned faceplates, the EtherNet/IP must be set up as specified in this integration document and the manual. The controller exchanges data between the devices and the FactoryTalk View SE faceplates notify personnel what is happening in the plant.

The following information allows you to customize the Cerabar S and set up the function blocks to use the Add-On Instructions (AOI) with an HMI server.

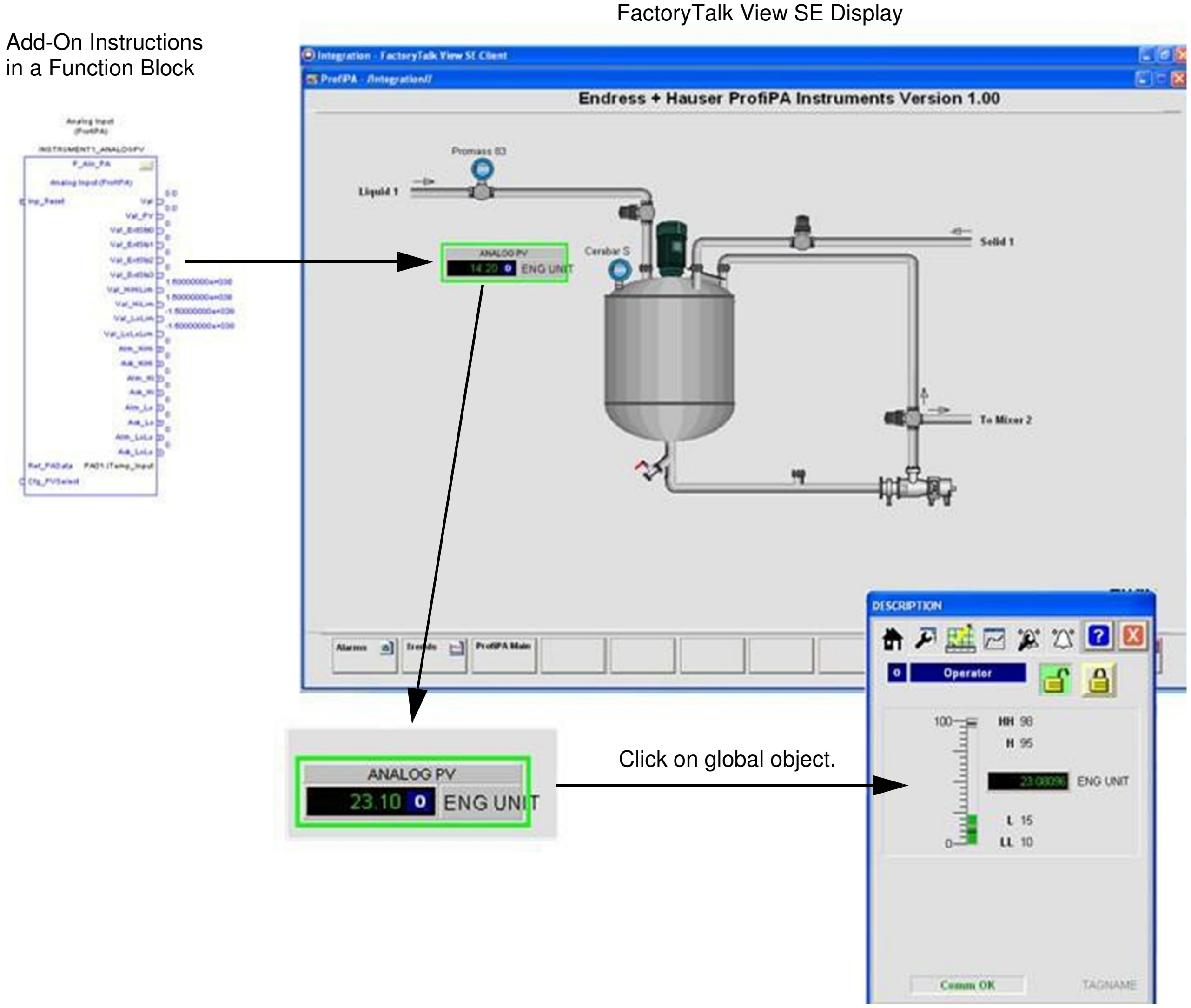
See Additional Resources on page 73 for more detailed information.

Add-On Instructions

An Add-On Instruction exchanges data between each process variable located in the process device and the faceplate installed on a display. The name of the specific instance of the Add-On Instruction becomes the link from the actual instrument to the faceplate on the graphic.

Global Object

A global object links the tag name to the faceplate, provides a touch area for the faceplate to be launched from, and displays the process variables and alarms.



FactoryTalk View SE Display

Add-On Instructions in a Function Block

Click on global object.

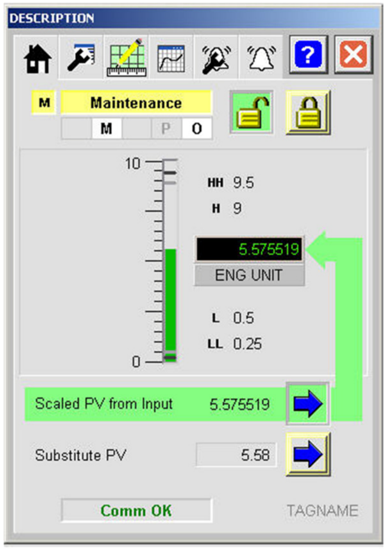
Integration - FactoryTalk View SE Client
ProfiPA - /Integration//
Endress + Hauser ProfiPA Instruments Version 1.00
Promass 83
Liquid 1
Cerabar S
Solid 1
To Mixer 2
ANALOG PV
ENG UNIT
Alarms
Trends
ProfiPA Main
ANALOG PV
23.10
0
ENG UNIT
DESCRIPTION
Operator
100
HH 98
H 95
ENG UNIT
L 15
LL 10
0
Comm OK
TAGNAME
Analog Input (ProfiPA)
P_AIn_PA

IMPORTANT A unique global object and faceplate are available for each field instrument due to each instrument having specific extended diagnostics.

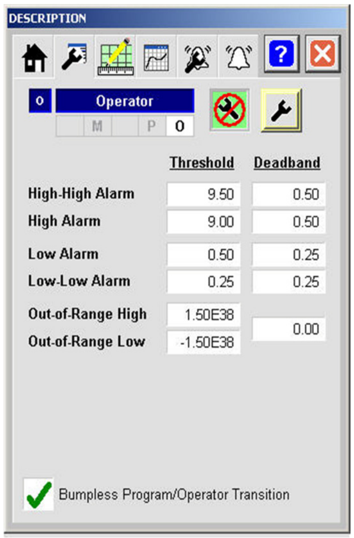
Faceplates

The FactoryTalk View SE generic display provides a graphical representation of the instrument based on the information contained within each Add-On Instruction. Navigation buttons at the top of the faceplate change the information displayed. Status displays show information using a bar graph, numeric values, and trend displays. Other displays show specific alarms and warning indications.

Some examples of predesigned faceplates are shown below.

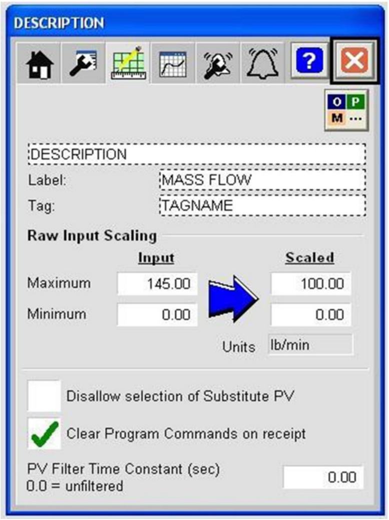

DESCRIPTION
M
Maintenance
M
P
O
10
0
ENG UNIT
Comm OK
TAGNAME

HH 9.5
H 9
L 0.5
LL 0.25
5.575519
Scaled PV from Input 5.575519
Substitute PV 5.58


DESCRIPTION
O
Operator
M
P
O

	Threshold	Deadband
High-High Alarm	9.50	0.50
High Alarm	9.00	0.50
Low Alarm	0.50	0.25
Low-Low Alarm	0.25	0.25
Out-of-Range High	1.50E38	0.00
Out-of-Range Low	-1.50E38	

✓ Bumpless Program/Operator Transition


DESCRIPTION
O
P
M
...

DESCRIPTION
Label: MASS FLOW
Tag: TAGNAME

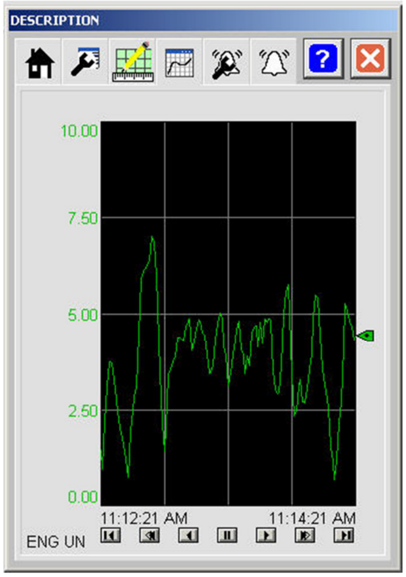
Raw Input Scaling

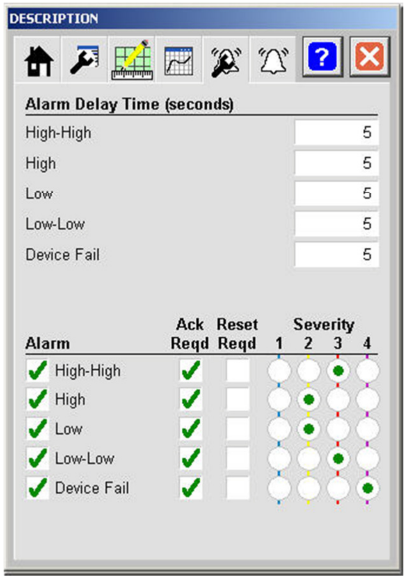
	Input	Scaled
Maximum	145.00	100.00
Minimum	0.00	0.00

Units lb/min

☐ Disallow selection of Substitute PV
✓ Clear Program Commands on receipt

PV Filter Time Constant (sec) 0.00
0.0 = unfiltered

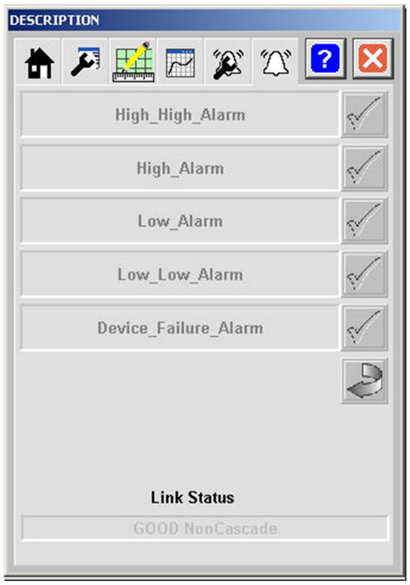

DESCRIPTION
10.00
7.50
5.00
2.50
0.00
11:12:21 AM
11:14:21 AM
ENG UN


DESCRIPTION

Alarm Delay Time (seconds)

High-High	5
High	5
Low	5
Low-Low	5
Device Fail	5

Alarm	Ack Reqd	Reset Reqd	Severity 1	2	3	4
✓ High-High	✓	☐	○	○	●	○
✓ High	✓	☐	○	●	○	○
✓ Low	✓	☐	○	●	○	○
✓ Low-Low	✓	☐	○	○	●	○
✓ Device Fail	✓	☐	○	○	○	●


DESCRIPTION
High_High_Alarm
High_Alarm
Low_Alarm
Low_Low_Alarm
Device_Failure_Alarm

Link Status
GOOD NonCascade

IMPORTANT A unique global object and faceplate are available for each field instrument due to the display of instrument-specific extended diagnostic information.

The faceplates provide the following information from the device:

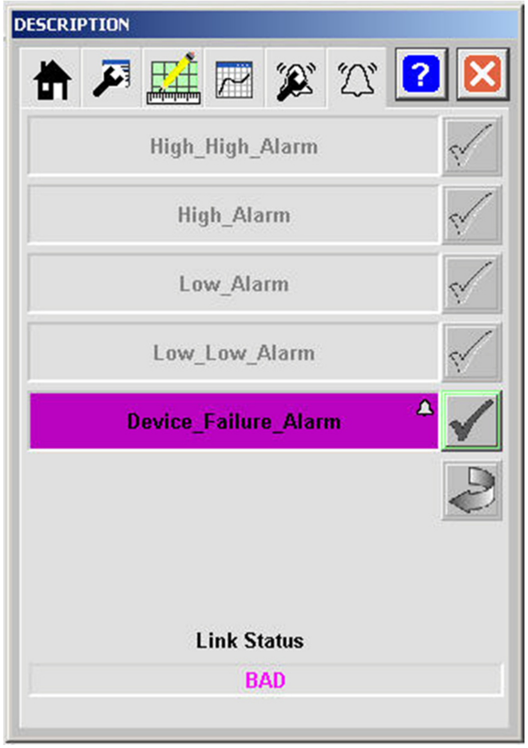
- FOUNDATION fieldbus process values (PV)
- PV fault status (communication fault)
- FOUNDATION fieldbus Link Status

You can configure the faceplates to provide the following information:

- FOUNDATION fieldbus PVrange (minimum and maximum)
- Tag name
- Description
- Engineering units
- Mode (such as operator or program)
- High-high, high, low, low-low alarms
- Over-range and under-range alarms
- Alarm delay
- Alarm hysteresis

Link Status Information

FOUNDATION Fieldbus Link Status provides information about an instrument when its transmitter or sensor is not running properly. It produces bit-based and numeric outputs that can be translated into Good Non-Cascade, Uncertain, and Bad Link. The example below shows Bad Link Status due to the Analog Input Block being Out of Service (OOS).


DESCRIPTION
High_High_Alarm
High_Alarm
Low_Alarm
Low_Low_Alarm
Device_Failure_Alarm

Link Status

BAD

Additional Resources

Resource	Description
FOUNDATION Fieldbus Instruments	
EtherNet/IP and ControlNet to FOUNDATION Fieldbus Linking Device 1788-UM057A-EN-P	Specifications and details of the 1788-EN2FFR and 1788-EN2FFR Hiprom Fieldbus Linking Device
Cerabar S Operating Instructions (PMC71, PMP71, PMP75) FOUNDATION Fieldbus publication BA00301PEN	How to install, wire, configure, and operate a Cerabar S Pressure Transmitter
http://www.products.endress.com/ethernet-ip-eds	Download EDS and AOP files for field instrument
http://www.products.endress.com/flow	Information about Endress+Hauser flowmeters
Controller Components	
ControlLogix Controllers Installation Instru ctions, publication 1756-IN101	How to install and configure a ControlLogix controller.
ControlLogix Controllers User Manual, publication 1756-UM001	How to configure, operate, and maintain a ControlLogix controller.
ControlLogix Ethernet/IP Modules 1756-IN612B-EN-P	Installation Instructions, ControlLogix EtherNet/IP Communication Module
Operator Components	
FactoryTalk View Site Edition User's Guide, publication VIEWSE-UM006	How to design, develop, and deploy FactoryTalk View SE applications
Faceplates, Add-On Instructions, project files, etc. (Login required. Please contact your sales representative.)	Download AOIs, Faceplates and Global Object graphics, and project files
Process Control Information	
PlantPAx Reference Manual, publication PROCES-RM001	Provides characterized recommendation for implementing a PlantPAx system.
PlantPAx Selection Guide SG001	Provides information for selecting equipment for PlantPAx
PlantPAx Process Objects Manual RM002	Process Objects Library Information
http://www.rockwellautomation.com/process	Information about Rockwell Automation process control and Integration Documents
http://literature.rockwellautomation.com	Available Rockwell Automation publications, including Integration Documents
http://www.endress.com	Information about Endress+Hauser

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At http://support.rockwellautomation.com/, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration, and troubleshooting, we offer TechConnect support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit http://support.rockwellautomation.com/.

Endress+Hauser Support

Please refer to your local Endress+Hauser Sales Center for precise information regarding the service support available in your area or visit http://www.endress.com.

Installation Assistance

If you experience a problem within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your product up and running.

United States	1.440.646.3434 Monday – Friday, 8 a.m. – 5 p.m. EST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

New Product Satisfaction Return

Rockwell Automation tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned, follow these procedures.

United States	Contact your distributor. You must provide a Customer Support case number (call the phone number above to obtain one) to your distributor in order to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for the return procedure.

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